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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/6 4/2
20301A ASSAULT BREAKER, MISSILE NUMBER FTV-1, ROUND NUMBER V161--ETC(U)
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March 81
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METEOROLOGICAL DATA REPORT
20301A Assault Breaker
Missile No. FTV-1
Round No. VIGI
31 March 1981

by

White Sands Meteorological Team

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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| REPORT DOCUMENTATION PAGE | | READ INSTRUCTIONS BEFORE COMPLETING FORM |
|---|---|--|
| 1. REPORT NUMBER DR 1171 | 2. GOVT ACCESSION NO. AD A100 532 | 3. RECIPIENT'S CATALOG NUMBER |
| 4. TITLE (and Subtitle) 20301A Assault Breaker Missile Number FTV-1 Round Number VIGI | 5. TYPE OF REPORT & PERIOD COVERED | |
| 7. AUTHOR(s) White Sands Meteorological Team | 6. PERFORMING ORG. REPORT NUMBER DA Task 1F665702D127402 | |
| 9. PERFORMING ORGANIZATION NAME AND ADDRESS / / | 10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS / / | |
| 11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002 | 12. REPORT DATE // March 1981 | |
| 14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research & Development Cmd Adelphi, MD 20783 | 13. NUMBER OF PAGES 46 | |
| 16. DISTRIBUTION STATEMENT (of this Report) DISTRIBUTION STATEMENT A Approved for public release; Distribution Unlimited | 15. SECURITY CLASS. (of this report) UNCLASSIFIED | |
| 17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) Approved for public release; distribution unlimited. | 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE | |
| 18. SUPPLEMENTARY NOTES | Accession For NTIS GRA&I <input checked="" type="checkbox"/> DTIC TAB <input type="checkbox"/> Unannounced <input type="checkbox"/> Justification _____ | |
| 19. KEY WORDS (Continue on reverse side if necessary and identify by block number) | By _____ Distribution / _____ Availability Codes _____ Avail and/or Special _____ Dist A | |
| 20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 20301A Assault Breaker, Missile Number FTV-1, Round Number VIGI, presented in tabular form. | | |

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INTRODUCTION

20301A Assault Breaker, Missile Number FIV-1, Round Number V1G1, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0918 on 31 March 1981. The scheduled launch time was 0855.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations of temperature ($^{\circ}$ C), relative humidity, dew point, wind direction and speed, and cloud cover were made at the met site at T-0 minutes.

Wind direction from one anemometer was

for . . .

Low level wind data were obtained from Single Theodolite hot balloon observations at:

SITE AND ALTITUDE

LC-33 1260 Meters and 660 Meters.

(b) Air structure data (rawinsonde) were collected at the following met sites. Data were collected from surface to as high as possible in 500-foot increments.

SITE AND TIME

| | |
|-------|------|
| WSD | 0918 |
| LC-37 | 0755 |
| HMN | 0655 |
| Jal | 0655 |
| Jal | 0918 |

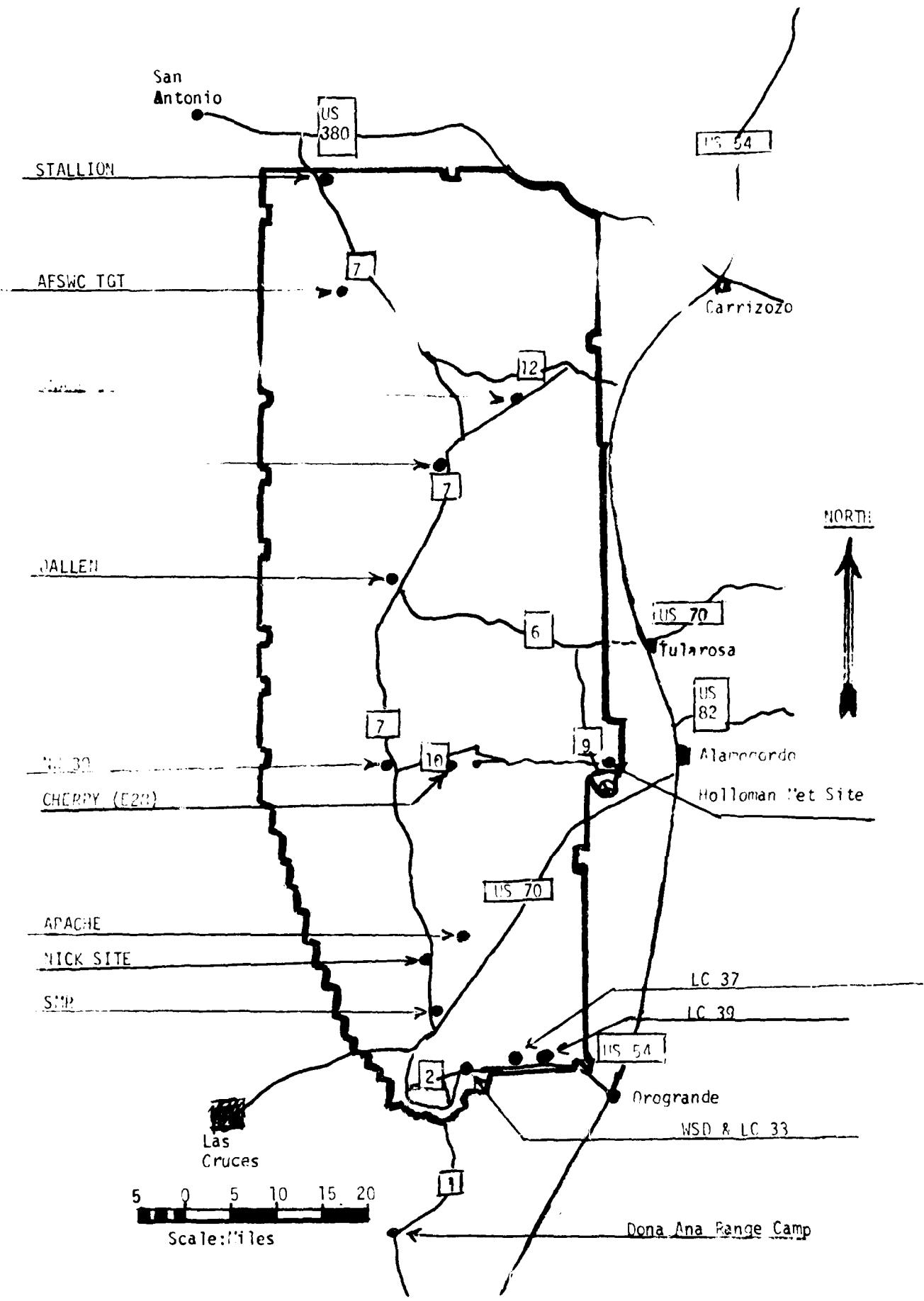


TABLE 1. Surface Observations taken at 0918 MST,
31 March 1981, at LC-33 (E&A) 20301A
Assault Breaker, Missile Number FTV-1,
Round Number V1G1.

| | | |
|-------------------|-------|-------------------|
| ELEVATION | 3983 | FT/MSL |
| PRESSURE | 882.4 | MB |
| TEMPERATURE | 16 | °C |
| RELATIVE HUMIDITY | 31 | |
| DEW POINT | -01 | °C |
| DENSITY | 1.059 | GM/M ³ |
| WIND SPEED | 12 | KTS |
| WIND DIRECTION | 015 | DEGREES |
| CLOUD COVER | CLEAR | |

PROJECT SURFACE OBSERVATION

TABLE 2

DATE 31 MARCH 1981
DAY MONTH YEAR

| TIME HRS | PRESSURE mb | TEMPERATURE OF °C | DEW POINT OF °C | RELATIVE HUMIDITY % | DENSITY gm/m ³ | WIND DIRECTION deg Tn | CHARACTER kts | VISIBILITY |
|-------------|----------------|-------------------------|-----------------------|---------------------------|------------------------------|-----------------------------|------------------|------------|
| 0842 | 879.5 | 13.5 | -13.2 | 14 | 1066 | CALM | | 50 |
| 0912 | 879.6 | 13.9 | -10.9 | 17 | 1064 | 270 | 02 | 50 |
| 0942 | 879.8 | 15.1 | -11.3 | 15 | 1060 | 240 | 03 | 50 |

| OBSTRUCTIONS TO VISIBILITY | CLOUDS | | | REMARKS | | | | |
|-------------------------------|------------------|------|------------------|---------|------------------|------|-----|-------|
| | 1st LAYER AMT | TYPE | 2nd LAYER AMT | TYPE | 3rd LAYER AMT | TYPE | HGT | |
| | | | | | | | | CLEAR |
| | | | | | | | | CLEAR |
| | | | | | | | | CLEAR |

PSYCHROMETRIC COMPUTATION

| TIME: | 0842 | 0912 | 0942 |
|-----------------|-------|-------|-------|
| DRY BULB TEMP. | 13.5 | 13.9 | 15.1 |
| WET BULB TEMP. | 03.5 | 04.1 | 04.6 |
| WET BULB DEPR. | 10.0 | 09.8 | 10.5 |
| DEW POINT | -13.2 | -10.9 | -11.3 |
| RELATIVE HUMID. | 14 | 17 | 15 |

X=450,491.60 Y= 464,023.05 H= 4053.00

DELAS-MT-MS FORM 12
01 NOV 1980

Supersedes AMSEL-BL-MT-MS Form 12, 28 Aug 72
and all project surface observation forms, except DIVAD Surface Observation form.

TABLE 3 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

| POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL | | | POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL | | | POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL | | |
|---|---------|-----------|---|---------|-----------|---|---------|-----------|
| T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS |
| -30 | 017 | 14 | -30 | 022 | 12 | -30 | 026 | 15 |
| -20 | 027 | 14 | -20 | 011 | 10 | -20 | 035 | 15 |
| -10 | 013 | 14 | -10 | 027 | 09 | -10 | 029 | 15 |
| 0.0 | 028 | 12 | 0.0 | 018 | 09 | 0.0 | 027 | 16 |
| +10 | 036 | 09 | +10 | 025 | 08 | +10 | 033 | 14 |

TABLE 3a LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

| LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base) | | | LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base) | | |
|--|---------|-----------|--|---------|-----------|
| T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS |
| -30 | 027 | 11 | -30 | 030 | 15 |
| -20 | 021 | 09 | -20 | 038 | 15 |
| -10 | 019 | 10 | -10 | 012 | 15 |
| 0.0 | 015 | 12 | 0.0 | 015 | 13 |
| +10 | 009 | 12 | +10 | 018 | 14 |

| LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base) | | | LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base) | | |
|---|---------|-----------|--|---------|-----------|
| T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS |
| -30 | 022 | 09 | -30 | 016 | 12 |
| -20 | M | 11 | -20 | 010 | 13 |
| -10 | 018 | 09 | -10 | 010 | 12 |
| 0.0 | 024 | 09 | 0.0 | 018 | 12 |
| +10 | 008 | 11 | +10 | 015 | 14 |

PILOT BALLOON MEASURED WIND DATA

TABLE 4

RELEASED FROM 1C-33 DATE 31 March 1981 TIME 0908 MST

COORDINATES (WSTM) X= 486,037.24 Y= 183,350.16 H= 3977.30

NOTE: WIND DIRECTIONS ARE REFERENCED TO
HEIGHTS ARE METERS AGL X OR FEET AGL :

| HEIGHT AGL | DIRECTION DEGREES | SPEED KTS |
|---------------|----------------------|--------------|
| sfc | 015 | 11 |
| 60 | 014 | 12 |
| 120 | 013 | 12 |
| 180 | 013 | 13 |
| 240 | 012 | 12 |
| 300 | 012 | 13 |
| 360 | 010 | 14 |
| 420 | 360 | 12 |
| 480 | 349 | 12 |
| 540 | 336 | 11 |
| 600 | 324 | 12 |
| 660 | 313 | 12 |
| 720 | 305 | 14 |
| 780 | 298 | 15 |
| 840 | 292 | 16 |
| 900 | 288 | 18 |
| 960 | 284 | 20 |
| 1020 | 280 | 20 |
| 1080 | 276 | 19 |
| 1140 | 272 | 18 |
| 1200 | 268 | 18 |
| 1260 | 263 | 18 |

PILOT BALLOON MEASURED WIND DATA

TABLE 5

RELEASED FROM LC-33

DATE 31 March 1981

TIME 0918 MST

COORDINATES (WSTM) X = 486,037.24 Y = 186,350.16 H = 3977.30

NOTE: WIND DIRECTIONS ARE REFERENCED TO
HEIGHTS ARE METERS AGL X OR FEET AGL :

STATION ALTITUDE 3989.00 FEET MSL
 31 MAR. 61 0918 HRS MST
 ASCENSION NO. 214

SIGNIFICANT LEVEL DATA
 0900020214
 WHITE SANDS
 TABLE 6

GEODETIC COORDINATES
 32°40'04.3" LAT DEG
 106°37'03.1" LON DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE DEGREES CENTIGRADE | AIR DEWPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT |
|-----------------------|-----------------------------------|-----------------------------------|------------------------------------|---------------------|
| 882.0 | 3989.0 | 16.0 | -4.0 | 25.0 |
| 865.4 | 4515.3 | 12.6 | -5.4 | 28.0 |
| 850.0 | 5009.1 | 11.9 | -5.1 | 30.0 |
| 836.2 | 5458.2 | 11.2 | -5.3 | 31.0 |
| 759.8 | 8055.3 | 5.0 | -8.8 | 36.0 |
| 723.0 | 9379.2 | 2.3 | -17.2 | 22.0 |
| 700.0 | 10232.9 | -2 | -20.4 | 20.0 |
| 678.0 | 11071.7 | -6 | -22.6 | 17.0 |
| 500.0 | 18916.6 | -17.5 | -37.2 | 16.0 |
| 458.4 | 20941.0 | -21.6 | -40.6 | 16.0 |
| 436.8 | 22103.0 | -25.0 | -40.9 | 21.0 |
| 408.4 | 23702.0 | -27.7 | -44.6 | 18.0 |
| 400.0 | 24192.3 | -29.0 | -45.7 | 18.0 |
| 381.2 | 25317.5 | -32.3 | -48.0 | 19.0 |
| 374.6 | 25722.0 | -33.4 | -49.0 | 19.0 |
| 323.8 | 29025.0 | -42.7 | | |
| 300.0 | 30708.5 | -46.2 | | |
| 250.0 | 34619.3 | -55.3 | | |
| 235.4 | 35880.2 | -56.6 | | |
| 210.8 | 38169.4 | -59.8 | | |
| 200.0 | 39251.5 | -60.1 | | |
| 179.8 | 41459.9 | -56.4 | | |
| 163.4 | 43466.3 | -55.3 | | |
| 150.0 | 45261.7 | -56.4 | | |
| 144.2 | 46088.6 | -55.6 | | |
| 137.2 | 47131.7 | -56.6 | | |
| 126.6 | 48810.0 | -57.5 | | |
| 116.8 | 50478.8 | -60.0 | | |
| 110.4 | 51641.8 | -59.1 | | |
| 100.0 | 53681.6 | -60.5 | | |
| 95.4 | 54649.9 | -60.3 | | |
| 63.6 | 62965.2 | -61.8 | | |
| 61.0 | 63824.0 | -59.1 | | |
| 56.0 | 65593.8 | -59.4 | | |
| 50.0 | 67948.2 | -57.5 | | |
| 46.2 | 69601.4 | -56.6 | | |
| 43.8 | 70730.9 | -52.2 | | |
| 41.2 | 72056.6 | -53.3 | | |
| 36.2 | 74808.9 | -50.4 | | |
| 31.2 | 78006.3 | -51.7 | | |

STATION ALTITUDE 3489.00 FEET MSL
31 MAR. 81 0918 HRS MST
ASCENSION NO. 214

SIGNIFICANT LEVEL DATA

09000,0214

WHITE SANDS

TABLE 6 cont'

ELEVATIC COORDINATES
32.40043 LAT DEG
106.37031 LON DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE AIR DEWPONT DEGREES CENTIGRAPH | REL.HUM. PERCENT |
|-----------------------|-----------------------------------|---|---------------------|
| 30.0 | 78849.4 | -50.8 | |
| 26.0 | 61958.7 | -47.0 | |
| 23.6 | 84087.0 | -45.8 | |
| 20.0 | 87769.3 | -41.5 | |
| 15.2 | 93995.0 | -37.0 | |
| 10.0 | 103604.4 | -36.4 | |
| 9.6 | 104543.5 | -36.1 | |

STATION ALTITUDE 3489.00 FEET MSL
1 MAR. 81 091A HRS MST
AIRCRAFT NO. <14

UPPER AIR DATA
0900020214
WHITE SANDS
TABLE 7

| ALTITUDE feet ft ft | PRESSURE millibars | TEMPERATURE DEGREES | AIR DEPOINT CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF WIND, DATA KNOTS DEGREES (IN) | INDEX OF REFRACTION |
|---------------------------|-----------------------|------------------------|---------------------------|---------------------|------------------------------|---|---------------------------|
| 1069.0 | 882.0 | 16.0 | -4.0 | 25.0 | 1060.6 | 663.1 | .000257 |
| 1100.0 | 881.6 | 15.9 | -4.0 | 25.1 | 1060.4 | 663.0 | .000257 |
| 1100.0 | 865.9 | 12.7 | -5.4 | 27.9 | 1053.4 | 659.3 | .000254 |
| 1100.0 | 850.3 | 11.9 | -5.1 | 30.0 | 1037.2 | 658.4 | .000251 |
| 1100.0 | 834.9 | 11.1 | -5.3 | 31.1 | 1021.3 | 657.4 | .000247 |
| 1100.0 | 819.7 | 9.9 | -6.0 | 32.0 | 1007.0 | 656.0 | .000243 |
| 1100.0 | 804.7 | 8.7 | -6.6 | 33.0 | 992.8 | 654.6 | .000239 |
| 1100.0 | 790.0 | 7.5 | -7.3 | 34.0 | 974.8 | 653.2 | .000235 |
| 1100.0 | 775.5 | 6.3 | -8.0 | 34.9 | 965.1 | 651.8 | .000231 |
| 1100.0 | 761.4 | 5.1 | -8.7 | 35.9 | 951.6 | 650.4 | .000227 |
| 1100.0 | 747.2 | 4.1 | -11.4 | 31.3 | 937.7 | 649.1 | .000222 |
| 1100.0 | 733.4 | 3.1 | -14.5 | 26.0 | 925.9 | 647.8 | .000216 |
| 1100.0 | 719.7 | 1.9 | -17.5 | 21.7 | 910.7 | 646.4 | .000211 |
| 1100.0 | 706.2 | .5 | -19.5 | 20.5 | 898.5 | 644.7 | .000207 |
| 1100.0 | 692.9 | -.3 | -21.1 | 19.0 | 884.2 | 643.7 | .000203 |
| 1100.0 | 679.9 | -.6 | -22.4 | 17.3 | 868.4 | 643.4 | .000199 |
| 1100.0 | 666.7 | -.5 | -23.4 | 16.9 | 854.6 | 642.2 | .000195 |
| 1100.0 | 653.7 | -.2 | -24.3 | 16.9 | 841.4 | 640.9 | .000192 |
| 1100.0 | 640.0 | -.3 | -25.3 | 16.8 | 828.4 | 639.6 | .000189 |
| 1100.0 | 626.5 | -.4 | -26.2 | 16.8 | 815.6 | 638.3 | .000185 |
| 1100.0 | 613.0 | -.3 | -27.1 | 16.7 | 803.0 | 637.0 | .000182 |
| 1100.0 | 600.3 | -.4 | -28.1 | 16.6 | 790.6 | 635.7 | .000179 |
| 1100.0 | 586.5 | -.5 | -29.0 | 16.6 | 778.4 | 634.4 | .000176 |
| 1100.0 | 573.0 | -.0 | -30.0 | 16.5 | 766.5 | 633.1 | .000173 |
| 1100.0 | 560.4 | -.7 | -30.9 | 16.4 | 754.7 | 631.8 | .000171 |
| 1100.0 | 546.4 | -.4 | -31.9 | 16.4 | 743.1 | 630.4 | .000168 |
| 1100.0 | 533.4 | -.4 | -32.8 | 16.3 | 731.7 | 629.1 | .000165 |
| 1100.0 | 519.5 | -.5 | -33.7 | 16.2 | 720.5 | 627.8 | .000162 |
| 1100.0 | 505.6 | -.6 | -34.7 | 16.2 | 709.4 | 626.5 | .000160 |
| 1100.0 | 491.0 | -.7 | -35.6 | 16.1 | 698.6 | 625.1 | .000157 |
| 1100.0 | 476.4 | -.4 | -36.6 | 16.0 | 687.9 | 623.8 | .000155 |
| 1100.0 | 461.8 | -.8 | -37.5 | 16.0 | 677.1 | 622.5 | .000152 |
| 1100.0 | 447.2 | -.5 | -38.3 | 16.0 | 665.9 | 621.3 | .000150 |
| 1100.0 | 433.6 | -.7 | -39.1 | 16.0 | 654.9 | 620.2 | .000147 |
| 1100.0 | 419.0 | -.4 | -39.9 | 16.0 | 644.1 | 619.0 | .000145 |
| 1100.0 | 405.4 | -.7 | -40.7 | 16.0 | 635.6 | 617.7 | .000142 |
| 1100.0 | 391.8 | -.8 | -40.6 | 16.3 | 624.2 | 615.9 | .000140 |
| 1100.0 | 377.2 | -.2 | -40.4 | 18.4 | 615.0 | 614.1 | .000138 |
| 1100.0 | 363.6 | -.7 | -40.3 | 20.6 | 604.6 | 612.9 | .000136 |
| 1100.0 | 349.0 | -.7 | -41.8 | 20.3 | 594.1 | 611.9 | .000133 |
| 1100.0 | 335.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 321.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 308.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 294.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 281.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 267.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 253.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 240.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 226.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 213.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 199.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 185.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 172.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 158.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 145.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 131.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 117.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 104.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 90.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 77.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 63.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 50.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 37.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 24.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | 11.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -3.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -16.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -30.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -43.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -57.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -71.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -84.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -98.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -111.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -125.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -139.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -152.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -166.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -180.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -194.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -208.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -221.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -235.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -248.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -262.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -276.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -289.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -303.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -316.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -330.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -344.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -357.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -371.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -384.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -398.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -412.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -425.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -439.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -452.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -466.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -480.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -493.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -507.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -520.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -534.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -548.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -561.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -575.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -588.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -602.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -616.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -629.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -643.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -656.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -670.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -684.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -697.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -711.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -724.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -738.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -752.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -765.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -779.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -792.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -806.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -820.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -833.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -847.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -860.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -874.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -888.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -901.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -915.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -928.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -942.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -956.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -969.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -983.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -996.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1010.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1024.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1037.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1051.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1064.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1078.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1092.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1105.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1119.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1132.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1146.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1160.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1173.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1187.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1200.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1214.4 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1228.0 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1241.6 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1255.2 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1268.8 | -.5 | -43.0 | 19.3 | | | |
| 1100.0 | -1282.4 | -.5 | -43.0 | 19.3 | | | |
| 1100. | | | | | | | |

STATION ALTITUDE 3989.00 FT¹
 31 MAR. 81
 091A HRS.
 ASSEMBLION NO. 214

UPPER AIR DATA
 0900020214
 WHITE SANDS

TABLE 7 cont'

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEG. DEGREES CELSIUS | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES FROM NORTH | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|--------------------------------|-----------------------|--|----------------------|------------------------------|----------------------------|--|-----------------------------|---------------------------|
| 23500.0 | 411.9 | -27.4 | 74.4 | 583.7 | 610.8 | 257.1 | 54.0 | 1.000131 |
| 24000.0 | 405.3 | -28.5 | 74.0 | 574.2 | 609.4 | 257.2 | 56.6 | 1.000129 |
| 24500.0 | 394.8 | -29.9 | 74.3 | 565.3 | 607.6 | 257.4 | 59.0 | 1.000127 |
| 25000.0 | 380.4 | -31.4 | 74.7 | 556.7 | 605.8 | 257.1 | 60.4 | 1.000125 |
| 25500.0 | 376.2 | -32.8 | 74.0 | 548.1 | 604.0 | 256.1 | 60.6 | 1.000123 |
| 26000.0 | 370.0 | -34.2 | 74.4 | 539.4 | 602.2 | 254.9 | 60.6 | 1.000121 |
| 26500.0 | 362.0 | -35.6 | 73.1 | 530.8 | 600.5 | 253.4 | 60.3 | 1.000119 |
| 27000.0 | 354.1 | -37.0 | 73.6 | 522.3 | 598.7 | 252.9 | 60.3 | 1.000117 |
| 27500.0 | 346.3 | -38.4 | 73.9 | 514.0 | 596.9 | 253.2 | 60.7 | 1.000115 |
| 28000.0 | 338.8 | -39.8 | 73.5 | 505.8 | 595.1 | 253.0 | 61.1 | 1.000113 |
| 28500.0 | 331.4 | -41.2 | 73.5 | 497.8 | 593.3 | 254.1 | 61.5 | 1.000111 |
| 29000.0 | 324.2 | -42.6 | 73.8 | 489.9 | 591.5 | 253.3 | 61.7 | 1.000109 |
| 29500.0 | 316.9 | -43.7 | 74.1 | 481.1 | 590.1 | 252.1 | 61.8 | 1.000107 |
| 30000.0 | 309.8 | -44.7 | 74.7 | 472.5 | 588.8 | 250.4 | 61.4 | 1.000105 |
| 30500.0 | 302.0 | -45.8 | 74.0 | 464.0 | 587.5 | 248.7 | 61.1 | 1.000103 |
| 31000.0 | 294.0 | -46.9 | 74.6 | 455.6 | 586.0 | 247.7 | 60.9 | 1.000101 |
| 31500.0 | 289.1 | -48.0 | 74.0 | 447.4 | 584.5 | 247.4 | 61.7 | 1.000100 |
| 32000.0 | 282.5 | -49.2 | 73.9 | 439.4 | 583.0 | 247.1 | 64.9 | 1.000098 |
| 32500.0 | 276.0 | -50.4 | 73.5 | 431.5 | 581.5 | 247.6 | 68.6 | 1.000096 |
| 33000.0 | 269.6 | -51.5 | 73.8 | 423.8 | 580.0 | 248.2 | 72.7 | 1.000094 |
| 33500.0 | 263.4 | -52.7 | 74.2 | 416.2 | 578.4 | 248.2 | 72.0 | 1.000093 |
| 34000.0 | 257.3 | -53.9 | 74.8 | 408.8 | 576.9 | 248.0 | 70.0 | 1.000091 |
| 34500.0 | 251.4 | -55.0 | 74.5 | 401.5 | 575.4 | 247.5 | 65.0 | 1.000089 |
| 35000.0 | 245.5 | -55.7 | 73.3 | 393.3 | 574.5 | 246.5 | 60.0 | 1.000088 |
| 35500.0 | 239.7 | -56.2 | 74.9 | 384.9 | 573.8 | 246.4 | 61.3 | 1.000086 |
| 36000.0 | 234.0 | -56.8 | 76.8 | 376.8 | 573.1 | 247.3 | 63.3 | 1.000084 |
| 36500.0 | 228.5 | -57.5 | 76.4 | 364.0 | 572.1 | 248.9 | 74.0 | 1.000082 |
| 37000.0 | 223.0 | -58.2 | 76.4 | 351.4 | 571.2 | 250.2 | 84.9 | 1.000080 |
| 37500.0 | 217.7 | -58.9 | 76.4 | 341.4 | 570.3 | 251.1 | 96.2 | 1.000079 |
| 38000.0 | 212.5 | -59.6 | 76.4 | 331.4 | 569.4 | 251.5 | 103.9 | 1.000077 |
| 38500.0 | 207.4 | -59.9 | 76.4 | 321.4 | 568.9 | 251.2 | 102.1 | 1.000075 |
| 39000.0 | 202.5 | -60.0 | 76.4 | 311.4 | 568.7 | 250.1 | 94.4 | 1.000074 |
| 39500.0 | 197.6 | -59.7 | 75.4 | 301.4 | 569.2 | 247.2 | 76.8 | 1.000072 |
| 40000.0 | 192.9 | -58.8 | 75.4 | 291.4 | 570.3 | 243.1 | 60.2 | 1.000070 |
| 40500.0 | 188.3 | -58.0 | 75.4 | 281.4 | 571.4 | 236.0 | 45.3 | 1.000068 |
| 41000.0 | 183.8 | -57.2 | 74.4 | 271.4 | 572.5 | 234.0 | 40.4 | 1.000066 |
| 41500.0 | 179.5 | -56.4 | 74.4 | 261.4 | 573.6 | 240.0 | 48.4 | 1.000064 |
| 42000.0 | 175.2 | -56.1 | 74.4 | 251.4 | 573.7 | 245.7 | 62.7 | 1.000063 |
| 42500.0 | 171.1 | -55.8 | 74.4 | 241.4 | 574.3 | 250.4 | 82.9 | 1.000061 |
| 43000.0 | 167.1 | -55.6 | 74.4 | 231.4 | 574.7 | 252.7 | 95.9 | 1.000060 |

* ALL LAST ONE ASSUMED RELATIVE HUMIDITY VALUE. . . USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL
 31 MAR. 81 0918 HRS MST
 ASCENSION NO. <14

UPPER AIR DATA

0900020214
 WHITE SANDS

GEODETIC COORDINATES
 32°49.043 LAT DEG
 106.37033 LON DEG

TABLE 7 cont'

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | DEWPOINT PERCENT | REL.HUM. GM/CUBIC METER | SPPFD WT | DATA SPOKE KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|------------------------------------|------------------|-------------------------|----------|------------------|---------------------|
| 43500.0 | 163.1 | -55.3 | | 260.9 | 575.0 | 250.0 | 1.000058 |
| 44000.0 | 159.3 | -55.6 | | 255.1 | 574.6 | 250. | 1.000057 |
| 44500.0 | 155.5 | -55.9 | | 249.5 | 574.2 | 250. | 1.000056 |
| 45000.0 | 151.9 | -56.2 | | 243.9 | 573.8 | 250. | 1.000054 |
| 45500.0 | 148.3 | -56.2 | | 238.1 | 573.9 | 250. | 1.000053 |
| 46000.0 | 144.8 | -55.7 | | 232.0 | 574.5 | 250. | 1.000052 |
| 46500.0 | 141.4 | -56.0 | | 226.8 | 574.1 | 250. | 1.000051 |
| 47000.0 | 138.1 | -56.5 | | 222.0 | 573.5 | 250. | 1.000049 |
| 47500.0 | 134.8 | -56.8 | | 217.1 | 573.0 | 250. | 1.000048 |
| 48000.0 | 131.6 | -57.1 | | 212.2 | 572.7 | 250. | 1.000047 |
| 48500.0 | 128.5 | -57.3 | | 207.4 | 572.3 | 250. | 1.000046 |
| 49000.0 | 125.4 | -57.8 | | 202.9 | 571.7 | 250. | 1.000045 |
| 49500.0 | 122.5 | -58.5 | | 198.8 | 570.7 | 250. | 1.000044 |
| 50000.0 | 119.5 | -59.3 | | 194.7 | 569.7 | 250. | 1.000043 |
| 50500.0 | 116.7 | -60.0 | | 190.7 | 568.8 | 250. | 1.000042 |
| 51000.0 | 113.9 | -59.6 | | 185.8 | 569.3 | 250. | 1.000041 |
| 51500.0 | 111.2 | -59.2 | | 181.0 | 569.8 | 250. | 1.000040 |
| 52000.0 | 108.5 | -59.3 | | 176.8 | 569.6 | 250. | 1.000039 |
| 52500.0 | 105.9 | -59.7 | | 172.8 | 569.2 | 250. | 1.000038 |
| 53000.0 | 103.4 | -60.0 | | 169.0 | 568.7 | 250. | 1.000037 |
| 53500.0 | 100.9 | -60.4 | | 165.2 | 568.3 | 250. | 1.000036 |
| 54000.0 | 98.5 | -60.4 | | 161.3 | 568.2 | 245. | 1.000035 |
| 54500.0 | 96.1 | -60.5 | | 157.3 | 568.3 | 243. | 1.000035 |
| 55000.0 | 93.8 | -60.4 | | 153.5 | 568.3 | 243. | 1.000034 |
| 55500.0 | 91.5 | -60.5 | | 149.9 | 568.2 | 242. | 1.000033 |
| 56000.0 | 89.3 | -60.5 | | 146.4 | 568.0 | 241. | 1.000033 |
| 56500.0 | 87.2 | -60.6 | | 142.9 | 567.9 | 239. | 1.000032 |
| 57000.0 | 85.1 | -60.7 | | 139.5 | 567.8 | 239. | 1.000031 |
| 57500.0 | 83.0 | -60.8 | | 136.2 | 567.7 | 239. | 1.000030 |
| 58000.0 | 81.0 | -60.9 | | 133.0 | 567.6 | 240. | 1.000030 |
| 58500.0 | 79.1 | -61.0 | | 129.8 | 567.4 | 241. | 1.000029 |
| 59000.0 | 77.2 | -61.1 | | 126.8 | 567.5 | 241. | 1.000028 |
| 59500.0 | 75.1 | -61.2 | | 123.8 | 567.2 | 241. | 1.000028 |
| 60000.0 | 73.0 | -61.3 | | 120.8 | 567.1 | 240. | 1.000027 |
| 60500.0 | 71.7 | -61.4 | | 118.0 | 567.0 | 240. | 1.000026 |
| 61000.0 | 70.0 | -61.4 | | 115.2 | 566.8 | 240. | 1.000025 |
| 61500.0 | 68.3 | -61.5 | | 112.5 | 566.7 | 240. | 1.000025 |
| 62000.0 | 66.7 | -61.6 | | 109.8 | 566.6 | 240. | 1.000024 |
| 62500.0 | 65.1 | -61.7 | | 107.2 | 566.5 | 239. | 1.000024 |
| 63000.0 | 63.5 | -61.7 | | 104.6 | 566.5 | 238.7 | 1.000024 |

STATION ALTITUDE 3489.00 FEET MSL
 31 MAR. 61 0918 HRS MST
 ASCENSION NO. 214

UPPER AIR DATA
 0900020214
 WHITE SANDS
 TABLE 7 cont'

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEWEPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC | SPEED OF SOUND KNOTS | WIND DIRECTION IN DEGREES (TIN) | WIND SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|------------------|------------------|----------------------|---------------------------------|------------------|---------------------|
| 6350.0 | 62.0 | -60.1 | 101.3 | 568.6 | 237.0 | 32.4 | 1.000023 | |
| 6400.0 | 60.5 | -59.1 | 98.4 | 569.9 | 233.9 | 29.1 | 1.000022 | |
| 6450.0 | 59.0 | -59.2 | 96.1 | 569.8 | 230.1 | 26.2 | 1.000021 | |
| 6500.0 | 57.6 | -59.3 | 93.9 | 569.7 | 225.5 | 23.6 | 1.000021 | |
| 6550.0 | 56.3 | -59.4 | 91.7 | 569.6 | 220.7 | 21.7 | 1.000020 | |
| 6600.0 | 54.9 | -59.1 | 89.4 | 570.0 | 215.0 | 19.9 | 1.000020 | |
| 6650.0 | 53.6 | -58.7 | 87.1 | 570.5 | 212.3 | 16.1 | 1.000019 | |
| 6700.0 | 52.3 | -58.3 | 84.8 | 571.1 | 208.4 | 12.2 | 1.000019 | |
| 6750.0 | 51.1 | -57.9 | 82.7 | 571.6 | 213.7 | 9.0 | 1.000018 | |
| 6800.0 | 49.9 | -57.5 | 80.6 | 572.1 | 230.9 | 6.5 | 1.000018 | |
| 6850.0 | 48.7 | -57.2 | 78.6 | 572.5 | 255.0 | 6.8 | 1.000017 | |
| 6900.0 | 47.5 | -56.9 | 76.6 | 572.9 | 266.0 | 9.8 | 1.000017 | |
| 6950.0 | 46.4 | -56.7 | 74.7 | 573.2 | 270.6 | 13.0 | 1.000017 | |
| 7000.0 | 45.3 | -55.0 | 72.4 | 575.3 | 270.6 | 16.1 | 1.000016 | |
| 7050.0 | 44.3 | -53.1 | 70.1 | 577.9 | 270.6 | 19.1 | 1.000016 | |
| 7100.0 | 43.3 | -52.4 | 68.3 | 578.8 | 209.6 | 21.2 | 1.000015 | |
| 7150.0 | 42.2 | -52.8 | 66.8 | 578.2 | 209.1 | 23.2 | 1.000015 | |
| 7200.0 | 41.3 | -53.3 | 65.4 | 577.7 | 267.4 | 24.4 | 1.000015 | |
| 7250.0 | 40.3 | -52.8 | 63.7 | 578.3 | 265.1 | 25.2 | 1.000014 | |
| 7300.0 | 39.4 | -52.3 | 62.1 | 579.0 | 263.4 | 24.5 | 1.000014 | |
| 7350.0 | 38.5 | -51.6 | 60.6 | 579.6 | 262.1 | 20.7 | 1.000013 | |
| 7400.0 | 37.6 | -51.2 | 59.0 | 580.3 | 260.3 | 16.9 | 1.000013 | |
| 7450.0 | 36.7 | -50.7 | 57.5 | 581.0 | 258.4 | 12.3 | 1.000013 | |
| 7500.0 | 40.3 | -52.8 | 56.1 | 581.3 | 254.2 | 7.6 | 1.000013 | |
| 7550.0 | 35.9 | -50.5 | 54.9 | 581.1 | 240.9 | 5.8 | 1.000012 | |
| 7600.0 | 35.1 | -50.7 | 53.6 | 580.8 | 163.9 | 1.7 | 1.000012 | |
| 7650.0 | 34.3 | -50.9 | 52.5 | 580.5 | 102.6 | 5.0 | 1.000012 | |
| 7700.0 | 32.7 | -51.3 | 51.3 | 580.3 | 91.3 | 9.2 | 1.000011 | |
| 7750.0 | 31.9 | -51.5 | 50.2 | 580.0 | 67.0 | 13.4 | 1.000011 | |
| 7800.0 | 31.2 | -51.7 | 49.1 | 579.7 | 88.4 | 12.7 | 1.000011 | |
| 7850.0 | 30.5 | -51.9 | 47.9 | 580.4 | 90.4 | 11.6 | 1.000011 | |
| 7900.0 | 30.5 | -51.1 | 52.5 | 581.2 | 95.4 | 9.5 | 1.000010 | |
| 7950.0 | 29.8 | -50.6 | 46.6 | 582.0 | 108.5 | 6.5 | 1.000010 | |
| 8000.0 | 29.1 | -50.0 | 45.5 | 582.8 | 137.5 | 4.4 | 1.000010 | |
| 8050.0 | 28.5 | -49.4 | 44.3 | 582.8 | 154.3 | 4.1 | 1.000010 | |
| 8100.0 | 27.8 | -48.8 | 43.2 | 583.5 | 42.1 | 171.7 | 4.1 | |
| 8150.0 | 26.6 | -47.6 | 41.0 | 584.3 | 186.6 | 4.5 | 1.000009 | |
| 8200.0 | 26.0 | -47.0 | 40.0 | 585.1 | 198.4 | 5.1 | 1.000009 | |
| 8250.0 | 25.4 | -46.7 | 39.0 | 586.3 | 207.3 | 5.9 | 1.000009 | |
| 8300.0 | 24.8 | -46.4 | 38.1 | 586.6 | 216.6 | 7.3 | 1.000008 | |

GEODETIC COORDINATES
 32°40'04.3 LAT UEG
 106°37'03.3 LON DEG

STATION ALTITUDE 3989.00 FEET MSL
 31 MAR. 61 0918 HRS MST
 ASCENSION NO. 214

UPPER AIR DATA
 0900020214
 WHITE SANDS
 TABLE 7 cont!

| GEOMETRIC PRESSURE ALITUDE MSL FEET | TEMPERATURE AIR DEGREES CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF WIND DATA KNOTS | WIND DATA DIRECTION DEGREES (TIN) | INDEX OF REFRACTION |
|---|---|---------------------|------------------------------|--------------------------------|---|---------------------------|
| 83500.0 | 24.2 | -46.1 | 37.2 | 597.0 | 223.3 | 8.9 |
| 84000.0 | 23.7 | -45.8 | 36.3 | 597.3 | 228.4 | 10.5 |
| 84500.0 | 23.2 | -45.5 | 35.4 | 598.0 | 232.9 | 12.1 |
| 85000.0 | 22.7 | -44.7 | 34.5 | 598.8 | 236.3 | 13.8 |
| 85500.0 | 22.1 | -44.1 | 33.7 | 599.5 | 238.9 | 15.4 |
| 86000.0 | 21.7 | -43.6 | 32.9 | 599.3 | 241.0 | 17.1 |
| 86500.0 | 21.2 | -43.0 | 32.0 | 599.0 | 242.5 | 18.5 |
| 87000.0 | 20.7 | -42.4 | 31.3 | 599.6 | 243.1 | 19.3 |
| 87500.0 | 20.2 | -41.8 | 30.5 | 592.5 | 243.6 | 20.0 |
| 88000.0 | 19.8 | -41.3 | 29.8 | 593.2 | 243.6 | 19.8 |
| 88500.0 | 19.4 | -41.0 | 29.1 | 593.6 | 243.2 | 19.0 |
| 89000.0 | 18.9 | -40.6 | 28.4 | 594.1 | 242.7 | 18.2 |
| 89500.0 | 18.5 | -40.2 | 27.7 | 594.5 | 242.3 | 17.2 |
| 90000.0 | 18.1 | -39.9 | 27.1 | 595.0 | 241.9 | 16.2 |
| 90500.0 | 17.7 | -39.5 | 26.4 | 595.5 | 242.0 | 15.6 |
| 91000.0 | 17.3 | -39.2 | 25.8 | 595.9 | 242.9 | 15.6 |
| 91500.0 | 17.0 | -38.8 | 25.2 | 596.4 | 243.4 | 15.7 |
| 92000.0 | 16.6 | -38.4 | 24.6 | 596.8 | 244.0 | 14.2 |
| 92500.0 | 16.2 | -38.1 | 24.1 | 597.3 | 243.4 | 11.4 |
| 93000.0 | 15.9 | -37.7 | 23.5 | 597.8 | 242.5 | 8.5 |
| 93500.0 | 15.5 | -37.4 | 23.0 | 598.2 | 225.7 | 2.7 |
| 94000.0 | 15.2 | -37.0 | 22.4 | 598.7 | 63.8 | 5.0 |
| 94500.0 | 14.9 | -37.0 | 21.9 | 598.7 | 76.0 | 12.3 |
| 95000.0 | 14.5 | -36.9 | 21.5 | 598.8 | 75.5 | 17.9 |
| 95500.0 | 14.2 | -36.9 | 21.0 | 598.8 | 72.0 | 23.1 |
| 96000.0 | 13.9 | -36.9 | 20.5 | 598.8 | 71.1 | 28.3 |
| 96500.0 | 13.6 | -36.8 | 20.1 | 598.9 | 70.6 | 25.8 |
| 97000.0 | 13.3 | -36.8 | 19.7 | 598.9 | 69.9 | 22.8 |
| 97500.0 | 13.0 | -36.8 | 19.2 | 598.9 | 69.3 | 19.4 |
| 98000.0 | 12.8 | -36.7 | 18.8 | 599.0 | 78.7 | 8.6 |
| 98500.0 | 12.5 | -36.7 | 18.4 | 599.0 | 201.3 | 3.8 |
| 99000.0 | 12.2 | -36.7 | 18.0 | 599.1 | 250.0 | 13.6 |
| 99500.0 | 12.0 | -36.7 | 17.6 | 599.1 | 228.9 | 20.9 |
| 100000.0 | 11.7 | -36.6 | 17.2 | 599.1 | 228.3 | 28.3 |
| 100500.0 | 11.4 | -36.6 | 16.9 | 599.2 | 227.0 | 33.2 |
| 101000.0 | 11.2 | -36.6 | 16.5 | 599.2 | 222.8 | 31.9 |
| 101500.0 | 11.0 | -36.5 | 16.1 | 599.3 | 218.4 | 30.7 |
| 102000.0 | 10.7 | -36.5 | 15.8 | 599.3 | 1.000004 | 1.000004 |
| 102500.0 | 10.5 | -36.5 | 15.4 | 599.3 | 1.000003 | 1.000003 |
| 103000.0 | 10.3 | -36.4 | 15.1 | 599.4 | 1.000003 | 1.000003 |

EARTH COORDINATES
 32°40'04.3 LAT DEG
 106°37'03.3 LON DEG

STATION ALTITUDE 3989.00 FEET MSL
31 MAR. 81 0918 HRS MST
ASCENSION NO. 214

UPPER AIR DATA
0900020214
WHITE SANDS

TABLE 7 cont'

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEW-POINT DEGREES CENTIGRADE | REL.HUM. PERCENT | SPEED OF SOUND METERS KNOTS | WIND DATA DIRECTION DEGREES (TRUE) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|------------------|-----------------------------|------------------------------------|-----------------------|---------------------|
| 103500.0 | 10.0 | -36.4 | 14.8 | 599.4 | 14.8 | 599.4 | 1.00003 |
| 104000.0 | 9.8 | -36.3 | 14.5 | 599.6 | 14.5 | 599.6 | 1.00003 |
| 104500.0 | 9.6 | -36.1 | 14.1 | 599.8 | 14.1 | 599.8 | 1.00003 |

GEODETIC COORDINATES
32°40'04.1 LAT DEG
106°37'03.1 LON DEG

STATION ALTITUDE 3989.00 FEET MSL
 31 MAR. 81 091A IIRS MST
 ASLENSION 1.0. <14

MANDATORY LEVELS
 0300020214
 WHITE CANUS
 TABLE 8

(LODGETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

| PRESSURE MILLIBARS | GEOPOTENTIAL HEIGHT | TEMPERATURE | | RH% MIN. PERCENT | WIND DATA DIRECTION DEGREES (TN) | SPEED KNOTS |
|-----------------------|------------------------|----------------|----------------------|---------------------|--|----------------|
| | | AIR DEGREES | DEWPNT CENTIGRADE | | | |
| 850.0 | 5005. | 11.9 | -5.1 | 30. | 336.0 | 11.9 |
| 800.0 | 6660. | 8.3 | -6.8 | 33. | 295.9 | 21.3 |
| 750.0 | 8395. | 4.3 | -10.8 | 32. | 280.2 | 27.0 |
| 700.0 | 10225. | -2.2 | -20.4 | 20. | 275.3 | 32.9 |
| 650.0 | 12161. | -2.9 | -24.6 | 17. | 273.2 | 34.9 |
| 600.0 | 14223. | -7.4 | -28.4 | 17. | 266.8 | 37.4 |
| 550.0 | 16426. | -12.2 | -32.6 | 16. | 262.5 | 39.4 |
| 500.0 | 18792. | -17.5 | -37.2 | 16. | 260.3 | 46.5 |
| 450.0 | 21356. | -22.9 | -40.6 | 16. | 257.7 | 44.2 |
| 400.0 | 24152. | -29.0 | -45.7 | 18. | 257.3 | 57.5 |
| 350.0 | 27229. | -37.7 | -57.7 | 10.** | 253.1 | 60.5 |
| 300.0 | 30648. | -46.2 | | | 248.3 | 61.0 |
| 250.0 | 34545. | -55.3 | | | 247.1 | 64.0 |
| 200.0 | 39158. | -60.1 | | | 248.9 | 88.2 |
| 175.0 | 41921. | -56.1 | | | 245.7 | 62.3 |
| 150.0 | 45141. | -56.4 | | | 255.2 | 62.6 |
| 125.0 | 48935. | -57.9 | | | 253.9 | 56.1 |
| 100.0 | 53517. | -60.5 | | | 245.2 | 39.9 |
| 80.0 | 58076. | -61.0 | | | 240.8 | 44.6 |
| 70.0 | 60795. | -61.4 | | | 240.8 | 48.7 |
| 60.0 | 63938. | -59.2 | | | 233.0 | 28.3 |
| 50.0 | 67694. | -57.5 | | | 227.1 | 6.8 |
| 40.0 | 72376. | -52.6 | | | 264.6 | 25.4 |
| 30.0 | 78513. | -50.8 | | | 92.4 | 10.7 |
| 25.0 | 82450. | -46.5 | | | 212.9 | 6.7 |
| 20.0 | 87358. | -41.5 | | | 243.8 | 20.2 |
| 15.0 | 93827. | -37.0 | | | 78.2 | |
| 10.0 | 103041. | -36.4 | | | H.7 | |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FLET MSL
31 MAR. 61 0755 HRS MST
ASCENSION NO. 16

SIG. IDENTICANT LF-Vt I
09001,0001,
L.C.-37
TABLE 9

GEODETIC COORDINATES
32°40'17.5 LAT DEG
106°31'23.2 LON DEG

| PRESSURE MILLIBARS | GLUMETRIC ALTITUDE MSL FEET | TEMPERATURE DEGREES CENTIGRADE | AIR DEWPOINT DEGREES CENTIGRADE | R.H. PERCENT |
|-----------------------|-----------------------------------|-----------------------------------|---------------------------------------|-----------------|
| 880.3 | 4051.4 | 13.6 | -1.9 | 34.0 |
| 873.2 | 4274.5 | 11.8 | -4.3 | 32.0 |
| 862.6 | 4609.3 | 10.9 | -5.1 | 32.0 |
| 850.0 | 5012.2 | 11.0 | -5.5 | 31.0 |
| 793.0 | 6901.0 | 7.4 | -6.7 | 36.0 |
| 734.8 | 8942.5 | 2.0 | -7.6 | 49.0 |
| 725.2 | 9291.1 | 1.9 | -11.6 | 36.0 |
| 700.0 | 10224.6 | -3 | -16.1 | 29.0 |
| 678.4 | 11045.2 | -2.4 | -18.8 | 27.0 |
| 660.0 | 11761.9 | -2.7 | -21.9 | 21.0 |
| 579.8 | 15100.0 | +8.6 | -27.4 | 20.0 |
| 500.0 | 18808.0 | -17.8 | -35.7 | 19.0 |
| 479.2 | 19850.5 | -19.2 | -36.9 | 19.0 |
| 417.8 | 23147.0 | -28.1 | -41.9 | 25.0 |
| 400.0 | 24170.2 | -30.5 | -43.0 | 28.0 |
| 388.6 | 24844.9 | -31.6 | -44.6 | 26.0 |
| 347.2 | 27428.8 | -38.8 | -49.7 | 30.0 |
| 333.8 | 28313.3 | -41.3 | | |
| 300.0 | 30676.2 | -45.9 | | |
| 265.6 | 33306.1 | -52.6 | | |
| 250.0 | 34586.2 | -55.2 | | |
| 226.6 | 36634.6 | -59.0 | | |
| 211.0 | 38104.1 | -60.3 | | |
| 200.0 | 39206.7 | -59.2 | | |
| 191.0 | 40159.4 | -58.3 | | |
| 186.4 | 40664.2 | -59.0 | | |
| 181.4 | 41228.4 | -57.3 | | |
| 168.0 | 42835.6 | -55.1 | | |
| 163.6 | 43393.3 | -55.9 | | |
| 150.0 | 45213.9 | -55.9 | | |
| 141.8 | 46392.5 | -56.2 | | |
| 114.2 | 50867.2 | -62.1 | | |
| 106.8 | 52234.3 | -61.8 | | |
| 100.0 | 53574.5 | -62.9 | | |
| 96.0 | 54403.2 | -63.5 | | |
| 79.2 | 58330.7 | -60.6 | | |
| 70.0 | 60862.6 | -61.6 | | |
| 59.8 | 64110.3 | -58.3 | | |
| 55.0 | 65837.0 | -61.4 | | |
| 50.9 | 67423.6 | -61.6 | | |

STATION ALTITUDE 4651.37 FEET MSL
31 MAR. 81 0755 HRS MST
ASCENSION NO. 16

SIGNIFICANT LEVEL DATA
09001.0016
LC-37
TABLE 9 cont'

GEODETIC COORDINATES
32°40'17.5" LAT UEG
106°31'23.2" LON DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE DEGREES | REL.HUM. PERCENT |
|-----------------------|-----------------------------------|------------------------|---------------------|
| 50.0 | 67790.1 | -60.1 | |
| 43.2 | 70851.9 | -53.4 | |
| 40.5 | 72218.6 | -55.4 | |
| 37.5 | 73859.1 | -50.6 | |
| 30.0 | 78655.8 | -51.8 | |
| 24.2 | 83336.6 | -44.8 | |
| 21.4 | 86048.7 | -46.4 | |
| 20.0 | 87541.3 | -44.8 | |
| 15.4 | 93425.9 | -37.2 | |
| 13.6 | 96284.1 | -35.1 | |
| 12.4 | 98409.6 | -37.0 | |
| 10.0 | 103341.1 | -37.0 | |
| 7.0 | 111509.3 | -37.8 | |
| 6.6 | 112860.0 | -36.1 | |
| 6.6 | 112860.0 | -36.1 | |

STATION ALTITUDE 4051.37 FEET MSL
 31 MAR. 01 0755 IRS MST
 ASCENSION NO. 16

UPPER AIR DATA
 09001600016
 LC-37
 TABLE 10

EODETIC COORDINATES
 32°40'17.5 LAT DEG
 106°31'23.2 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|------------------------------------|------------------|------------------------|----------------------|---------------------|
| | | AIR DEPOINT DEGREES | PERCENT | GM/CUBIC METER | KNOTS | |
| 4051.4 | 860.3 | 13.6 | -1.9 | 34.0 | 1067.0 | 1.000262 |
| 4500.0 | 866.0 | 11.2 | -4.9 | 32.0 | 1054.1 | 1.000256 |
| 5000.0 | 850.4 | 11.0 | -5.4 | 31.0 | 1046.7 | 1.000251 |
| 5500.0 | 834.9 | 10.1 | -5.7 | 32.3 | 1025.1 | 1.000247 |
| 6000.0 | 819.7 | 9.1 | -6.0 | 33.6 | 1004.8 | 1.000243 |
| 6500.0 | 804.8 | 8.2 | -6.4 | 34.9 | 994.8 | 1.000240 |
| 7000.0 | 790.1 | 7.1 | -6.7 | 36.6 | 980.2 | 1.000236 |
| 7500.0 | 775.5 | 5.8 | -6.8 | 39.8 | 966.6 | 1.000233 |
| 8000.0 | 761.1 | 4.5 | -7.0 | 43.0 | 953.3 | 1.000230 |
| 8500.0 | 747.0 | 3.2 | -7.3 | 46.2 | 940.1 | 1.000227 |
| 9000.0 | 733.2 | 2.0 | -8.2 | 46.9 | 926.8 | 1.000223 |
| 9500.0 | 719.5 | 1.4 | -12.5 | 34.4 | 911.6 | 1.000219 |
| 10000.0 | 706.0 | .2 | -15.0 | 30.7 | 898.7 | 1.000215 |
| 10500.0 | 692.7 | -1.0 | -17.0 | 28.3 | 885.9 | 1.000210 |
| 11000.0 | 679.6 | -2.3 | -18.7 | 27.1 | 873.3 | 1.000206 |
| 11500.0 | 666.7 | -2.6 | -20.7 | 23.2 | 857.8 | 1.000202 |
| 12000.0 | 653.9 | -3.1 | -22.3 | 20.9 | 843.1 | 1.000197 |
| 12500.0 | 641.4 | -4.9 | -23.2 | 20.8 | 829.7 | 1.000193 |
| 13000.0 | 629.0 | -5.8 | -24.0 | 20.6 | 816.4 | 1.000189 |
| 13500.0 | 616.9 | -6.7 | -24.8 | 20.5 | 803.9 | 1.000185 |
| 14000.0 | 605.1 | -7.5 | -25.6 | 20.3 | 790.6 | 1.000180 |
| 14500.0 | 593.5 | -8.4 | -26.5 | 20.2 | 778.0 | 1.000177 |
| 15000.0 | 582.1 | -9.6 | -27.3 | 20.0 | 765.6 | 1.000174 |
| 15500.0 | 570.6 | -10.8 | -28.3 | 19.9 | 753.9 | 1.000171 |
| 16000.0 | 559.3 | -12.1 | -29.5 | 19.8 | 742.5 | 1.000168 |
| 16500.0 | 548.0 | -13.3 | -31.7 | 19.6 | 731.3 | 1.000166 |
| 17000.0 | 537.4 | -14.8 | -32.8 | 19.5 | 720.3 | 1.000163 |
| 17500.0 | 526.8 | -15.8 | -33.9 | 19.2 | 709.5 | 1.000160 |
| 18000.0 | 516.4 | -17.0 | -35.0 | 19.1 | 698.8 | 1.000157 |
| 18500.0 | 506.2 | -18.1 | -35.9 | 19.0 | 677.4 | 1.000154 |
| 19000.0 | 496.1 | -19.7 | -36.5 | 19.0 | 665.4 | 1.000152 |
| 19500.0 | 486.1 | -20.8 | -37.1 | 19.4 | 654.2 | 1.000150 |
| 20000.0 | 476.2 | -21.0 | -37.8 | 20.2 | 644.2 | 1.000147 |
| 20500.0 | 466.4 | -22.3 | -38.5 | 21.1 | 634.3 | 1.000145 |
| 21000.0 | 456.8 | -23.7 | -39.3 | 22.0 | 624.6 | 1.000143 |
| 21500.0 | 447.4 | -25.0 | -40.1 | 22.9 | 615.4 | 1.000140 |
| 22000.0 | 438.2 | -26.4 | -40.9 | 23.8 | 605.7 | 1.000138 |
| 22500.0 | 429.2 | -27.7 | -41.7 | 24.7 | 596.5 | 1.000136 |
| 23000.0 | 420.4 | -28.9 | -42.5 | 26.0 | 587.0 | 1.000134 |
| 23500.0 | 411.6 | | | | | 1.000132 |

STATION ALTITUDE 4051.37 FEET MSL
31 MAR. 61 0755 IRS MST
ASCENSION NO. 16

UPPER AIR DATA
09001A0016
LC-37

TABLE 10 cont'

GEODETIC COORDINATES
32°40'17.5 LAT DEG
106°31'23.2 LONG DEG

| GEOMETRIC ALTITUDE ASL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES | DEWPPOINT CENTIGRADE | REL.HUM. PERCENT | GMI/CUBIC METER | SPEED OF SOUND KNOTS | DIRECTION, HEIGHTS (IN) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|--------------------------------|-----------------------|-------------------------------|-------------------------|---------------------|--------------------|----------------------------|----------------------------|-----------------------------|---------------------------|
| 24000.0 | 402.9 | -30.1 | -42.8 | 27.5 | 577.4 | 607.4 | 253.1 | 54.0 | 1.000129 |
| 24500.0 | 394.4 | -31.0 | -43.8 | 27.0 | 567.4 | 606.2 | 251.8 | 54.9 | 1.000127 |
| 25000.0 | 386.0 | -32.0 | -44.9 | 26.2 | 557.6 | 605.0 | 250.9 | 55.8 | 1.000125 |
| 25500.0 | 377.7 | -33.4 | -45.9 | 27.0 | 548.8 | 603.2 | 250.3 | 56.8 | 1.000123 |
| 26000.0 | 369.5 | -34.8 | -46.9 | 27.8 | 540.1 | 601.5 | 249.7 | 57.6 | 1.000121 |
| 26500.0 | 361.5 | -36.2 | -47.9 | 28.6 | 531.5 | 599.7 | 249.2 | 58.1 | 1.000119 |
| 27000.0 | 353.6 | -37.6 | -48.9 | 29.3 | 523.2 | 597.9 | 248.4 | 58.7 | 1.000117 |
| 27500.0 | 346.1 | -39.0 | -50.6 | 27.6** | 514.9 | 596.1 | 247.6 | 59.4 | 1.000115 |
| 28000.0 | 338.5 | -40.4 | -59.6 | 10.6** | 506.6 | 594.5 | 246.5 | 60.4 | 1.000113 |
| 28500.0 | 331.6 | -41.7 | | | 498.1 | 592.7 | 245.4 | 61.5 | 1.000111 |
| 29000.0 | 325.6 | -42.6 | | | 489.0 | 591.5 | 244.5 | 62.6 | 1.000109 |
| 29500.0 | 318.4 | -43.6 | | | 480.2 | 590.2 | 244.0 | 63.5 | 1.000107 |
| 30000.0 | 309.3 | -44.6 | | | 471.4 | 589.0 | 244.7 | 63.8 | 1.000105 |
| 30500.0 | 302.4 | -45.6 | | | 462.9 | 587.7 | 245.5 | 63.9 | 1.000103 |
| 31000.0 | 295.5 | -46.7 | | | 454.7 | 586.2 | 246.6 | 63.4 | 1.000101 |
| 31500.0 | 288.6 | -48.0 | | | 446.8 | 584.6 | 247.5 | 63.2 | 1.000100 |
| 32000.0 | 282.2 | -49.3 | | | 439.1 | 582.9 | 247.7 | 63.5 | 1.000098 |
| 32500.0 | 275.7 | -50.5 | | | 431.5 | 581.2 | 247.7 | 63.9 | 1.000096 |
| 33000.0 | 269.4 | -51.8 | | | 424.0 | 579.6 | 247.6 | 64.8 | 1.000094 |
| 33500.0 | 263.2 | -53.0 | | | 416.4 | 578.0 | 247.5 | 66.4 | 1.000093 |
| 34000.0 | 257.0 | -54.0 | | | 408.6 | 576.7 | 247.5 | 68.9 | 1.000091 |
| 34500.0 | 251.0 | -55.0 | | | 401.9 | 575.4 | 247.6 | 71.3 | 1.000089 |
| 35000.0 | 245.1 | -56.0 | | | 393.1 | 574.1 | 247.6 | 73.6 | 1.000088 |
| 35500.0 | 239.3 | -56.9 | | | 385.5 | 572.9 | 247.4 | 74.7 | 1.000086 |
| 36000.0 | 233.6 | -57.8 | | | 377.9 | 571.7 | 246.9 | 74.4 | 1.000084 |
| 36500.0 | 228.1 | -58.8 | | | 370.6 | 570.4 | 246.3 | 73.8 | 1.000083 |
| 37000.0 | 222.6 | -59.3 | | | 362.7 | 569.7 | 245.5 | 72.9 | 1.000081 |
| 37500.0 | 217.3 | -59.8 | | | 354.7 | 569.1 | 244.6 | 72.3 | 1.000079 |
| 38000.0 | 212.1 | -60.2 | | | 346.9 | 568.5 | 244.2 | 72.5 | 1.000077 |
| 38500.0 | 207.0 | -59.9 | | | 338.1 | 568.9 | 243.8 | 73.2 | 1.000075 |
| 39000.0 | 202.0 | -59.4 | | | 329.3 | 569.6 | 243.7 | 74.7 | 1.000073 |
| 39500.0 | 197.2 | -58.9 | | | 321.7 | 570.2 | 243.8 | 76.2 | 1.000071 |
| 40000.0 | 192.5 | -58.5 | | | 312.3 | 570.8 | 244.4 | 77.7 | 1.000070 |
| 40500.0 | 187.9 | -58.6 | | | 305.3 | 570.4 | 244.9 | 78.8 | 1.000068 |
| 41000.0 | 183.4 | -58.0 | | | 297.0 | 571.4 | 245.3 | 78.7 | 1.000066 |
| 41500.0 | 179.1 | -56.9 | | | 288.5 | 572.9 | 245.6 | 78.5 | 1.000064 |
| 42000.0 | 174.8 | -56.2 | | | 280.8 | 573.8 | 245.7 | 78.0 | 1.000063 |
| 42500.0 | 170.7 | -55.6 | | | 273.3 | 574.7 | 245.8 | 77.4 | 1.000061 |
| 43000.0 | 166.7 | -55.3 | | | 266.6 | 575.0 | 246.0 | 78.9 | 1.000059 |
| 43500.0 | 162.8 | -55.9 | | | 261.0 | 574.2 | 247.4 | 80.5 | 1.000058 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL
 31 MAR. 81 0755 HRS MST
 ASCENSION NO. 16

UPPER AIR DATA
 0900160016
 LC-37
 TABLE 10 cont'

(EODETIC COORDINATES
 32.40175 LAT DEG
 106.31237 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEWEPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DIRECTION DEGREES (TN) | SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|------------------|------------------------|----------------------|-----------------------------|-------------|---------------------|
| 44000.0 | 158.9 | -55.9 | 254.9 | 574.2 | 248.5 | 01.3 | 1.000057 | |
| 44500.0 | 155.2 | -55.9 | 248.9 | 574.2 | 249.7 | 02.0 | 1.000055 | |
| 45000.0 | 151.5 | -55.9 | 243.0 | 574.2 | 250.5 | 00.2 | 1.000054 | |
| 45500.0 | 148.0 | -56.0 | 237.3 | 574.1 | 251.4 | 77.1 | 1.000053 | |
| 46000.0 | 144.5 | -56.1 | 231.9 | 574.0 | 252.0 | 73.9 | 1.000052 | |
| 46500.0 | 141.1 | -56.3 | 226.7 | 573.6 | 252.2 | 70.7 | 1.000050 | |
| 47000.0 | 137.7 | -57.0 | 221.9 | 572.8 | 252.5 | 67.7 | 1.000049 | |
| 47500.0 | 134.4 | -57.7 | 217.3 | 571.9 | 252.0 | 66.0 | 1.000048 | |
| 48000.0 | 131.2 | -58.3 | 212.7 | 571.0 | 251.6 | 64.4 | 1.000047 | |
| 48500.0 | 128.1 | -59.0 | 208.3 | 570.1 | 251.1 | 63.0 | 1.000046 | |
| 49000.0 | 125.0 | -59.6 | 203.9 | 569.3 | 250.7 | 61.7 | 1.000045 | |
| 49500.0 | 122.0 | -60.3 | 199.7 | 568.4 | 250.1 | 60.4 | 1.000044 | |
| 50000.0 | 119.1 | -61.0 | 195.5 | 567.5 | 248.8 | 58.2 | 1.000044 | |
| 50500.0 | 116.2 | -61.6 | 191.4 | 566.6 | 247.3 | 56.0 | 1.000043 | |
| 51000.0 | 113.5 | -62.1 | 187.3 | 566.0 | 245.5 | 54.8 | 1.000042 | |
| 51500.0 | 110.7 | -62.0 | 182.6 | 566.1 | 243.4 | 54.4 | 1.000041 | |
| 52000.0 | 108.0 | -61.9 | 178.1 | 566.3 | 242.3 | 55.1 | 1.000040 | |
| 52500.0 | 105.4 | -62.0 | 173.9 | 566.1 | 243.1 | 57.7 | 1.000039 | |
| 53000.0 | 102.9 | -62.4 | 170.0 | 565.5 | 244.0 | 60.2 | 1.000038 | |
| 53500.0 | 100.4 | -62.8 | 166.2 | 565.0 | 245.5 | 61.7 | 1.000037 | |
| 54000.0 | 97.9 | -63.1 | 162.4 | 564.6 | 246.9 | 63.3 | 1.000036 | |
| 54500.0 | 95.5 | -63.2 | 158.6 | 564.4 | 248.1 | 64.8 | 1.000035 | |
| 55000.0 | 93.2 | -62.9 | 154.5 | 564.9 | 249.3 | 66.2 | 1.000034 | |
| 55500.0 | 91.0 | -62.5 | 150.5 | 565.4 | 250.2 | 66.5 | 1.000034 | |
| 56000.0 | 88.8 | -62.2 | 146.6 | 565.8 | 251.2 | 66.8 | 1.000033 | |
| 56500.0 | 86.6 | -61.9 | 142.8 | 566.3 | 251.3 | 64.3 | 1.000032 | |
| 57000.0 | 84.5 | -61.5 | 139.1 | 566.7 | 251.0 | 60.6 | 1.000031 | |
| 57500.0 | 82.5 | -61.2 | 135.6 | 567.2 | 250.3 | 57.9 | 1.000030 | |
| 58000.0 | 80.5 | -60.8 | 132.1 | 567.7 | 249.3 | 56.1 | 1.000029 | |
| 58500.0 | 78.5 | -60.7 | 128.8 | 567.9 | 248.5 | 55.2 | 1.000029 | |
| 59000.0 | 76.7 | -60.9 | 125.6 | 567.6 | 248.2 | 56.2 | 1.000028 | |
| 59500.0 | 74.8 | -61.1 | 122.9 | 567.4 | 247.9 | 57.2 | 1.000027 | |
| 60000.0 | 73.0 | -61.3 | 120.0 | 567.1 | 247.7 | 57.4 | 1.000027 | |
| 60500.0 | 71.2 | -61.5 | 117.2 | 566.8 | 247.5 | 57.4 | 1.000026 | |
| 61000.0 | 69.5 | -61.5 | 114.4 | 566.8 | 247.3 | 56.8 | 1.000025 | |
| 61500.0 | 67.9 | -61.0 | 111.4 | 567.5 | 246.9 | 53.9 | 1.000025 | |
| 62000.0 | 66.2 | -60.4 | 108.5 | 568.2 | 246.5 | 50.9 | 1.000024 | |
| 62500.0 | 64.7 | -59.9 | 105.6 | 568.9 | 245.7 | 45.4 | 1.000024 | |
| 63000.0 | 63.1 | -59.4 | 102.9 | 569.5 | 244.4 | 38.3 | 1.000023 | |
| 63500.0 | 61.6 | -58.9 | 100.2 | 570.2 | 242.5 | 31.2 | 1.000022 | |

STATION ALTITUDE 4051.37 FEET MSL
 31 MAR. 81 0755 HRS MST
 ASCENSION NO. 16

UPPER AIR DATA
 09001A0016
 LC-37
 TABLE 10 cont'

GEODETIC COORDINATES
 32°40'17.5 LAT DEG
 106°31'23.2 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE DEGREES CENTIGRADE | AIR DEPOINT PERCENT | REL.HUM. PERCENT | SPEED OF SOUND METERS | WIND DATA DIRECTION DEGREES (IN) | SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--------------------------------|---------------------|------------------|-----------------------|----------------------------------|-------------|---------------------|
| 64000.0 | 60.1 | -58.4 | | | 97.5 | 570.9 | 240.0 | 25.0 |
| 64500.0 | 56.7 | -59.0 | | | 95.5 | 570.1 | 235.8 | 18.9 |
| 65000.0 | 57.3 | -59.9 | | | 95.6 | 568.9 | 229.2 | 13.7 |
| 65500.0 | 55.9 | -60.8 | | | 91.7 | 567.7 | 224.5 | 11.6 |
| 66000.0 | 54.6 | -61.4 | | | 89.8 | 566.9 | 217.9 | 9.6 |
| 66500.0 | 53.2 | -61.5 | | | 87.6 | 566.8 | 213.7 | 8.7 |
| 67000.0 | 52.0 | -61.5 | | | 85.5 | 566.7 | 215.4 | 9.1 |
| 67500.0 | 50.7 | -61.3 | | | 83.4 | 567.1 | 217.0 | 9.5 |
| 68000.0 | 49.5 | -59.6 | | | 80.8 | 569.3 | 219.4 | 10.1 |
| 68500.0 | 46.3 | -58.5 | | | 78.5 | 570.7 | 221.9 | 10.8 |
| 69000.0 | 47.2 | -57.5 | | | 76.2 | 572.2 | 224.0 | 11.6 |
| 69500.0 | 46.1 | -56.4 | | | 74.0 | 573.6 | 226.9 | 12.2 |
| 70000.0 | 45.0 | -55.3 | | | 71.9 | 575.1 | 229.7 | 12.8 |
| 70500.0 | 43.9 | -54.2 | | | 69.9 | 576.5 | 232.6 | 13.4 |
| 71000.0 | 42.9 | -53.6 | | | 68.1 | 577.2 | 236.7 | 13.9 |
| 71500.0 | 41.9 | -54.3 | | | 66.7 | 576.3 | 240.4 | 14.5 |
| 72000.0 | 40.9 | -55.1 | | | 65.4 | 575.3 | 243.6 | 14.4 |
| 72500.0 | 40.0 | -54.6 | | | 63.7 | 576.0 | 247.2 | 13.6 |
| 73000.0 | 39.0 | -53.1 | | | 61.8 | 577.9 | 251.1 | 12.8 |
| 73500.0 | 38.1 | -51.7 | | | 60.0 | 579.8 | 254.9 | 11.7 |
| 74000.0 | 37.3 | -50.6 | | | 58.3 | 581.1 | 259.4 | 10.4 |
| 74500.0 | 36.4 | -50.4 | | | 57.0 | 581.0 | 265.2 | 9.2 |
| 75000.0 | 35.6 | -50.9 | | | 55.7 | 580.8 | 266.7 | 8.8 |
| 75500.0 | 34.7 | -51.0 | | | 54.5 | 580.6 | 268.2 | 8.4 |
| 76000.0 | 33.9 | -51.1 | | | 53.3 | 580.5 | 269.5 | 8.0 |
| 76500.0 | 33.2 | -51.3 | | | 52.1 | 580.3 | 269.2 | 7.4 |
| 77000.0 | 32.4 | -51.4 | | | 50.9 | 580.2 | 268.6 | 6.8 |
| 77500.0 | 31.7 | -51.5 | | | 49.8 | 581.3 | 269.1 | 6.0 |
| 78000.0 | 30.9 | -51.6 | | | 48.6 | 579.8 | 271.9 | 4.9 |
| 78500.0 | 30.2 | -51.8 | | | 47.5 | 579.7 | 276.4 | 3.7 |
| 79000.0 | 29.5 | -51.3 | | | 46.4 | 580.3 | 286.2 | 2.5 |
| 79500.0 | 28.9 | -50.5 | | | 45.2 | 581.3 | 319.4 | 1.4 |
| 80000.0 | 28.2 | -49.8 | | | 44.0 | 582.2 | 24.1 | 1.5 |
| 80500.0 | 27.6 | -49.0 | | | 42.8 | 583.2 | 50.1 | 2.6 |
| 81000.0 | 26.9 | -48.3 | | | 41.7 | 584.2 | 58.7 | 3.5 |
| 81500.0 | 26.3 | -47.5 | | | 40.7 | 585.2 | 63.7 | 4.5 |
| 82000.0 | 25.7 | -46.8 | | | 39.6 | 586.1 | 66.1 | 5.0 |
| 82500.0 | 25.1 | -46.1 | | | 38.6 | 587.1 | 65.2 | 3.4 |
| 83000.0 | 24.6 | -45.3 | | | 37.6 | 588.1 | 62.9 | 1.8 |
| 83500.0 | 24.0 | -44.9 | | | 36.7 | 588.6 | 333.3 | .2 |

STATION ALTITUDE 4051.37 FEET MSL
31 MAR. 81 0755 HRS MST

ASCENSION NO. 16

UPPER AIR DATA
09001H0016
LC-37

TABLE 10 cont'

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREE CENTIGRADE | R.H. PERCENT | DENSITY GM/CUBIC | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES (TN) | WIND SPEED KNOTS | INDEX OF REFRACTION |
|--------------------------------|-----------------------|--------------------------------------|-----------------|---------------------|----------------------------|--|---------------------|---------------------------|
| 84000.0 | 23.5 | -45.2 | 35.9 | 5.08.2 | 254.7 | 3.0 | 1.000008 | |
| 84500.0 | 23.0 | -45.5 | 35.1 | 5.07.8 | 252.9 | 6.0 | 1.000008 | |
| 85000.0 | 22.4 | -45.8 | 34.4 | 5.07.4 | 252.3 | 8.7 | 1.000008 | |
| 85500.0 | 21.9 | -46.1 | 33.7 | 5.07.1 | 252.2 | 9.4 | 1.000007 | |
| 86000.0 | 21.4 | -46.4 | 32.9 | 5.06.7 | 252.1 | 10.1 | 1.000007 | |
| 86500.0 | 21.0 | -45.9 | 32.1 | 5.07.3 | 252.0 | 10.6 | 1.000007 | |
| 87000.0 | 20.5 | -45.4 | 31.3 | 5.08.0 | 251.1 | 9.3 | 1.000007 | |
| 87500.0 | 20.0 | -44.8 | 30.6 | 5.08.6 | 250.0 | 8.0 | 1.000007 | |
| 88000.0 | 19.6 | -44.2 | 29.8 | 5.09.5 | 248.5 | 6.7 | 1.000007 | |
| 88500.0 | 19.2 | -43.6 | 29.1 | 5.00.3 | 245.5 | 6.1 | 1.000006 | |
| 89000.0 | 18.7 | -42.9 | 28.4 | 5.01.1 | 241.9 | 5.6 | 1.000006 | |
| 89500.0 | 18.3 | -42.3 | 27.7 | 5.02.0 | 237.7 | 5.1 | 1.000006 | |
| 90000.0 | 17.9 | -41.6 | 27.0 | 5.02.8 | 234.4 | 5.0 | 1.000006 | |
| 90500.0 | 17.5 | -41.0 | 26.3 | 5.03.6 | 231.3 | 5.0 | 1.000006 | |
| 91000.0 | 17.2 | -40.3 | 25.7 | 5.04.4 | 228.2 | 4.9 | 1.000006 | |
| 91500.0 | 16.8 | -39.7 | 25.0 | 5.05.3 | 223.4 | 4.6 | 1.000006 | |
| 92000.0 | 16.4 | -39.0 | 24.4 | 5.06.1 | 216.2 | 4.0 | 1.000005 | |
| 92500.0 | 16.0 | -38.4 | 23.8 | 5.06.9 | 207.0 | 3.6 | 1.000005 | |
| 93000.0 | 15.7 | -37.8 | 23.2 | 5.07.7 | 194.3 | 3.2 | 1.000005 | |
| 93500.0 | 15.4 | -37.1 | 22.7 | 5.08.5 | 176.1 | 2.9 | 1.000005 | |
| 94000.0 | 15.0 | -36.6 | 22.1 | 5.09.0 | 156.7 | 3.0 | 1.000005 | |
| 94500.0 | 14.7 | -36.4 | 21.6 | 5.09.4 | 140.1 | 3.4 | 1.000005 | |
| 95000.0 | 14.4 | -36.0 | 21.1 | 5.09.9 | 130.1 | 3.7 | 1.000005 | |
| 95500.0 | 14.1 | -35.7 | 20.6 | 6.00.3 | 122.1 | 4.2 | 1.000004 | |
| 96000.0 | 13.8 | -35.3 | 20.2 | 6.00.8 | 115.7 | 4.7 | 1.000004 | |
| 96500.0 | 13.5 | -35.3 | 19.7 | 6.00.8 | 118.3 | 4.8 | 1.000004 | |
| 97000.0 | 13.2 | -35.7 | 19.3 | 6.00.3 | 124.1 | 4.8 | 1.000004 | |
| 97500.0 | 12.9 | -36.2 | 19.0 | 5.09.7 | 129.8 | 4.9 | 1.000004 | |
| 98000.0 | 12.6 | -36.6 | 18.6 | 5.09.1 | 139.5 | 5.0 | 1.000004 | |
| 98500.0 | 12.4 | -37.0 | 18.2 | 5.08.7 | 154.3 | 5.4 | 1.000004 | |
| 99000.0 | 12.1 | -37.0 | 17.8 | 5.08.7 | 166.4 | 6.1 | 1.000004 | |
| 99500.0 | 11.8 | -37.0 | 17.4 | 5.08.7 | 175.3 | 7.0 | 1.000004 | |
| 100000.0 | 11.6 | -37.0 | 17.1 | 5.08.7 | 179.0 | 7.1 | 1.000004 | |
| 100500.0 | 11.3 | -37.0 | 16.7 | 5.08.7 | 182.6 | 7.3 | 1.000004 | |
| 101000.0 | 11.1 | -37.0 | 16.3 | 5.08.7 | 186.0 | 7.5 | 1.000004 | |
| 101500.0 | 10.8 | -37.0 | 16.0 | 5.08.7 | 186.0 | 8.7 | 1.000004 | |
| 102000.0 | 10.6 | -37.0 | 15.6 | 5.08.7 | 185.2 | 10.1 | 1.000003 | |
| 102500.0 | 10.4 | -37.0 | 15.3 | 5.08.7 | 184.6 | 11.5 | 1.000003 | |
| 103000.0 | 10.1 | -37.0 | 15.0 | 5.08.7 | 182.7 | 13.3 | 1.000003 | |
| 103500.0 | 9.9 | -37.0 | 14.7 | 5.08.7 | 179.9 | 15.8 | 1.000003 | |

STATION ALTITUDE 4051.37 FEET MSL
 31 MAR. 81 0755 HRS MST
 ASCENSION NO. 16

UPPER AIR DATA
 09001A0016
 LC-37

TABLE 10 cont'

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES | DEWPONT CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES (IN) | SPEED KNOTS | INDEX OF REFRACTION |
|--------------------------------|-----------------------|----------------------------|-----------------------|---------------------|---------------------------|-------------------------|--|----------------|---------------------------|
| 104000.0 | 9.7 | -37.1 | | | 14.3 | 598.6 | 177.8 | 18.3 | 1.00003 |
| 104500.0 | 9.5 | -37.1 | | | 14.0 | 598.5 | 176.4 | 20.4 | 1.00003 |
| 105000.0 | 9.3 | -37.2 | | | 13.7 | 598.5 | 176.2 | 20.4 | 1.00003 |
| 105500.0 | 9.1 | -37.2 | | | 13.4 | 598.4 | 176.0 | 20.4 | 1.00003 |
| 106000.0 | 9.9 | -37.3 | | | 13.1 | 598.3 | 175.8 | 20.4 | 1.00003 |
| 106500.0 | 8.7 | -37.3 | | | 12.9 | 598.3 | 178.2 | 20.0 | 1.00003 |
| 107000.0 | 8.5 | -37.4 | | | 12.6 | 598.2 | 181.2 | 19.4 | 1.00003 |
| 107500.0 | 8.3 | -37.4 | | | 12.3 | 598.2 | 184.4 | 19.0 | 1.00003 |
| 108000.0 | 8.2 | -37.5 | | | 12.1 | 598.1 | 184.4 | 19.6 | 1.00003 |
| 108500.0 | 8.0 | -37.5 | | | 11.8 | 598.0 | 182.0 | 21.1 | 1.00003 |
| 109000.0 | 7.8 | -37.6 | | | 11.5 | 598.0 | 180.0 | 22.7 | 1.00003 |
| 109500.0 | 7.6 | -37.6 | | | 11.3 | 597.9 | 179.7 | 23.9 | 1.00003 |
| 110000.0 | 7.5 | -37.7 | | | 11.1 | 597.8 | 184.6 | 23.8 | 1.00002 |
| 110500.0 | 7.3 | -37.7 | | | 10.8 | 597.8 | 189.5 | 24.0 | 1.00002 |
| 111000.0 | 7.2 | -37.8 | | | 10.6 | 597.7 | 194.3 | 24.3 | 1.00002 |
| 111500.0 | 7.0 | -37.8 | | | 10.4 | 597.7 | | | 1.00002 |
| 112000.0 | 6.9 | -37.2 | | | 10.1 | 598.4 | | | 1.00002 |
| 112500.0 | 6.7 | -36.6 | | | 9.9 | 599.2 | | | 1.00002 |

GEODETIC COORDINATES
 32.40175 LAT DEG
 106.31232 LON DEG

STATION ALTITUDE 4051.37 FEET MSL
 31 MAR. 81 0755 HRS MST
 ASCENSION NO. 16

MANDATORY LEVELS
 09001A016
 LC-37
 TABLE 11

| PRESSURE MILLIBARS | GEOPOTENTIAL FEET | TEMPERATURE DEGREES | AIR DEMPNT CENTIGRADE | HGT. + HUM. PERCENT | WIND DATA DIRECTION DEGREES (IN) | SPEED KNOTS |
|-----------------------|----------------------|------------------------|-----------------------------|------------------------|--|----------------|
| 850.0 | 5009. | 11.0 | -5.5 | 31. | 341.5 | 6.7 |
| 800.0 | 6658. | 7.9 | -6.5 | 35. | 294.1 | 14.2 |
| 750.0 | 8390. | 3.5 | -7.2 | 46. | 283.2 | 26.5 |
| 700.0 | 10215. | -3 | -16.1 | 29. | 277.2 | 29.8 |
| 650.0 | 12146. | -3.4 | -22.6 | 21. | 270.1 | 32.7 |
| 600.0 | 14208. | -7.0 | -26.0 | 20. | 266.9 | 38.0 |
| 550.0 | 16415. | -11.9 | -30.4 | 20. | 261.1 | 38.7 |
| 500.0 | 18782. | -17.6 | -35.7 | 19. | 258.5 | 45.3 |
| 450.0 | 21344. | -23.3 | -39.1 | 22. | 258.9 | 49.6 |
| 400.0 | 24130. | -30.5 | -43.0 | 28. | 252.7 | 54.3 |
| 350.0 | 27198. | -38.3 | -49.4 | 30. | 248.0 | 54.0 |
| 300.0 | 30616. | -45.9 | | | 245.0 | 63.7 |
| 250.0 | 34512. | -55.2 | | | 247.6 | 71.6 |
| 200.0 | 39114. | -59.2 | | | 243.6 | 75.3 |
| 175.0 | 41873. | -56.3 | | | 245.7 | 78.0 |
| 150.0 | 45094. | -55.9 | | | 250.8 | 79.0 |
| 125.0 | 48875. | -59.6 | | | 250.7 | 61.8 |
| 100.0 | 53411. | -62.9 | | | 245.6 | 61.9 |
| 80.0 | 57934. | -60.7 | | | 249.1 | 55.7 |
| 70.0 | 60655. | -61.6 | | | 247.4 | 57.4 |
| 60.0 | 63813. | -58.4 | | | 239.9 | 24.9 |
| 50.0 | 67537. | -50.1 | | | 218.1 | 9.7 |
| 40.0 | 72194. | -54.6 | | | 246.8 | 13.7 |
| 30.0 | 78321. | -51.8 | | | 277.9 | 3.4 |
| 25.0 | 82251. | -45.9 | | | 65.0 | 3.2 |
| 20.0 | 87132. | -44.8 | | | 250.1 | 4.0 |
| 15.0 | 93560. | -36.8 | | | 157.4 | 5.0 |
| 10.0 | 102780. | -37.0 | | | 161.0 | 14.6 |
| 7.0 | 110861. | -37.8 | | | | |

EODETIC COORDINATES
 32°40'17.5" LAT UEG
 106°31'23.2" LON DEG

STATION ALTITUDE 4126.59 FEET MSL
 31 MAR. 61 0655 HRS MST
 ASCENSION NO. 53

SIGNIFICANT LEVEL DATA
 0900010053
 HOLLOWMAN
 TABLE 12

GEODETIC COORDINATES
 32° 88' 86" LAT DEG
 106° 09' 96" LON DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE DEGREES | AIR DEWPOINT CENTIGRADE | REL. HUM. PERCENT |
|-----------------------|-----------------------------------|------------------------|-------------------------------|----------------------|
| 876.4 | 4126.6 | 5.6 | -5.7 | 44.0 |
| 866.2 | 4444.3 | 11.3 | -2.8 | 37.0 |
| 850.0 | 4961.3 | 10.6 | -3.8 | 36.0 |
| 700.0 | 10156.8 | -1.6 | -11.1 | 48.0 |
| 668.4 | 11360.3 | -3.9 | -17.1 | 35.0 |
| 659.0 | 11727.8 | -3.7 | -21.8 | 23.0 |
| 629.3 | 12920.1 | -5.7 | -25.0 | 20.0 |
| 500.0 | 18696.9 | -19.1 | -35.3 | 27.0 |
| 472.6 | 20071.2 | -21.0 | -36.2 | 24.0 |
| 400.0 | 24040.9 | -31.3 | -42.8 | 31.0 |
| 388.4 | 24725.8 | -32.1 | -42.1 | 36.0 |
| 334.4 | 28142.9 | -40.6 | -49.3 | 38.0 |
| 327.9 | 28583.0 | -40.6 | | |
| 300.0 | 30555.0 | -45.7 | | |
| 250.0 | 34475.2 | -54.7 | | |
| 232.8 | 35966.7 | -57.8 | | |
| 228.0 | 36401.2 | -56.2 | | |
| 200.0 | 39120.1 | -60.0 | | |
| 185.8 | 40636.5 | -59.6 | | |
| 171.3 | 42317.7 | -58.0 | | |
| 163.8 | 43245.4 | -59.0 | | |
| 162.5 | 43411.1 | -56.7 | | |
| 150.0 | 45082.5 | -57.1 | | |
| 128.0 | 48372.4 | -59.6 | | |
| 117.2 | 50190.8 | -59.6 | | |
| 109.1 | 51674.6 | -57.8 | | |
| 100.0 | 53478.6 | -59.8 | | |
| 81.2 | 57744.9 | -62.6 | | |
| 70.0 | 60782.3 | -60.4 | | |
| 63.1 | 62928.1 | -58.3 | | |
| 55.4 | 65631.1 | -58.6 | | |
| 50.0 | 67741.3 | -62.4 | | |
| 43.8 | 70504.4 | -52.6 | | |
| 39.2 | 72859.9 | -55.1 | | |
| 33.6 | 76152.0 | -50.1 | | |
| 30.0 | 78593.2 | -51.4 | | |
| 22.8 | 84580.5 | -44.6 | | |
| 20.0 | 87475.2 | -45.9 | | |
| 17.0 | 91076.9 | -43.3 | | |

STATION ALTITUDE 4126.59 FEET MSL
31 MAR. 61 0655 HRS MST
ASCENSION NO. 53

UPPER AIR DATA
0900010053
HOLLOWMAN
TABLE 13

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE DEGREES CENTIGRADE | AIR DEPOINT PERCENT | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES (IN) SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--------------------------------|---------------------|-------------------|------------------------|----------------------|--|---------------------|
| 4126.6 | 876.4 | 5.6 | -5.7 | 44.0 | 1093.4 | 651.0 | 30.0 | 4.1 |
| 4500.0 | 864.4 | 11.2 | -2.9 | 36.9 | 1056.7 | 657.7 | 12.4 | 6.4 |
| 5000.0 | 848.8 | 10.5 | -3.9 | 36.1 | 1040.3 | 656.8 | 2.7 | 9.8 |
| 5500.0 | 833.1 | 9.3 | -4.5 | 37.2 | 1025.3 | 655.4 | 358.2 | 13.4 |
| 6000.0 | 817.6 | 8.2 | -5.1 | 38.4 | 1010.6 | 654.0 | 353.1 | 13.4 |
| 6500.0 | 802.5 | 7.0 | -5.8 | 39.6 | 996.1 | 652.7 | 344.0 | 10.8 |
| 7000.0 | 787.6 | 5.8 | -6.5 | 40.7 | 981.8 | 651.3 | 327.0 | 9.0 |
| 7500.0 | 773.1 | 4.6 | -7.2 | 41.9 | 967.8 | 649.9 | 304.5 | 8.5 |
| 8000.0 | 758.8 | 3.5 | -7.9 | 43.0 | 954.0 | 648.5 | 289.0 | 10.6 |
| 8500.0 | 744.7 | 2.3 | -8.6 | 44.2 | 940.4 | 647.1 | 279.0 | 12.9 |
| 9000.0 | 730.9 | 1.1 | -9.4 | 45.3 | 927.0 | 645.7 | 271.7 | 14.8 |
| 9500.0 | 717.4 | -1.1 | -10.1 | 46.5 | 913.8 | 644.3 | 268.9 | 16.6 |
| 10000.0 | 704.1 | -1.2 | -10.9 | 47.6 | 900.8 | 642.9 | 267.6 | 18.2 |
| 10500.0 | 690.8 | -2.3 | -12.7 | 44.3 | 887.3 | 641.6 | 271.6 | 22.3 |
| 11000.0 | 677.7 | -3.2 | -15.2 | 38.9 | 873.7 | 640.4 | 274.4 | 26.6 |
| 11500.0 | 664.8 | -3.8 | -18.6 | 30.4 | 859.2 | 639.6 | 276.5 | 31.3 |
| 12000.0 | 652.1 | -4.2 | -22.5 | 22.3 | 844.0 | 639.1 | 277.6 | 35.1 |
| 12500.0 | 639.6 | -5.0 | -23.8 | 21.1 | 830.5 | 638.1 | 277.7 | 36.9 |
| 13000.0 | 627.3 | -5.9 | -25.1 | 20.1 | 817.3 | 637.0 | 277.0 | 38.4 |
| 13500.0 | 614.9 | -7.0 | -25.8 | 20.7 | 804.7 | 635.7 | 275.5 | 39.3 |
| 14000.0 | 602.8 | -8.2 | -26.4 | 21.3 | 792.3 | 634.3 | 272.9 | 39.7 |
| 14500.0 | 590.9 | -9.4 | -27.1 | 21.9 | 780.1 | 632.9 | 269.8 | 40.0 |
| 15000.0 | 579.5 | -10.5 | -27.8 | 22.5 | 768.1 | 631.5 | 268.0 | 40.2 |
| 15500.0 | 567.9 | -11.7 | -28.5 | 23.1 | 756.3 | 630.1 | 266.0 | 40.4 |
| 16000.0 | 556.7 | -12.8 | -29.2 | 23.7 | 744.7 | 628.7 | 268.1 | 40.2 |
| 16500.0 | 545.7 | -14.0 | -30.0 | 24.3 | 733.3 | 627.3 | 269.1 | 40.0 |
| 17000.0 | 534.9 | -15.2 | -30.7 | 24.9 | 722.1 | 625.8 | 269.1 | 39.4 |
| 17500.0 | 524.4 | -16.3 | -31.5 | 25.5 | 711.1 | 624.4 | 268.5 | 39.8 |
| 18000.0 | 514.1 | -17.5 | -32.2 | 26.2 | 700.2 | 623.0 | 267.1 | 41.1 |
| 18500.0 | 503.9 | -18.6 | -33.0 | 26.8 | 689.6 | 621.6 | 264.2 | 41.7 |
| 19000.0 | 493.8 | -19.5 | -33.9 | 26.3 | 678.1 | 620.5 | 260.9 | 46.7 |
| 19500.0 | 483.8 | -20.2 | -35.0 | 25.2 | 666.2 | 619.7 | 257.9 | 49.1 |
| 20000.0 | 474.0 | -20.9 | -36.0 | 24.2 | 654.4 | 618.8 | 255.1 | 51.5 |
| 20500.0 | 464.2 | -22.1 | -36.8 | 24.8 | 644.0 | 617.3 | 253.4 | 53.6 |
| 21000.0 | 454.5 | -23.4 | -37.6 | 25.6 | 633.9 | 615.7 | 251.9 | 55.6 |
| 21500.0 | 445.1 | -24.7 | -36.4 | 26.5 | 624.0 | 614.1 | 251.0 | 57.5 |
| 22000.0 | 435.8 | -26.0 | -37.2 | 27.4 | 614.2 | 612.5 | 250.3 | 59.1 |
| 22500.0 | 426.8 | -27.3 | -40.1 | 28.3 | 604.6 | 610.9 | 251.4 | 59.1 |
| 23000.0 | 417.9 | -28.6 | -40.9 | 29.2 | 595.2 | 609.3 | 252.5 | 59.0 |
| 23500.0 | 409.2 | -29.9 | -41.8 | 30.0 | 585.9 | 607.7 | 252.3 | 57.9 |

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

STATION ALTITUDE 4126.59 FEET MSL
31 MAR. 81 0655 HRS MST
ASCENSION NO. 53

UPPER AIR DATA
0900010053
HOLLOWMAN

TABLE 13 cont'

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE DEGREES | AIR DEPOINT DEGREES | REL. HUM. PERCENT | SPEED OF SOUND KNOTS METER | WIND DATA DIRECTION DEGREES (IN) | SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|---------------------|---------------------|-------------------|----------------------------|----------------------------------|-------------|---------------------|
| 24000.0 | 400.7 | -31.2 | -42.7 | 30.9 | 576.8 | 606.0 | 251.8 | 57.5 |
| 24500.0 | 392.2 | -31.8 | -42.3 | 34.4 | 566.1 | 605.2 | 250.4 | 59.0 |
| 25000.0 | 383.8 | -32.8 | -42.7 | 36.2 | 556.1 | 604.0 | 249.8 | 61.5 |
| 25500.0 | 375.4 | -34.0 | -43.7 | 36.5 | 546.9 | 602.5 | 249.9 | 65.0 |
| 26000.0 | 367.3 | -35.3 | -44.8 | 36.7 | 537.9 | 600.9 | 249.6 | 67.9 |
| 26500.0 | 359.4 | -36.5 | -45.8 | 37.0 | 529.0 | 599.3 | 249.3 | 70.6 |
| 27000.0 | 351.6 | -37.8 | -46.9 | 37.3 | 520.2 | 597.7 | 249.1 | 72.6 |
| 27500.0 | 344.0 | -39.0 | -48.0 | 37.6 | 511.7 | 596.2 | 248.8 | 73.3 |
| 28000.0 | 336.5 | -40.2 | -49.0 | 37.9 | 503.3 | 594.6 | 248.5 | 72.1 |
| 28500.0 | 329.1 | -40.6 | -62.7 | 7.2** | 493.0 | 594.1 | 247.6 | 68.9 |
| 29000.0 | 321.8 | -41.8 | -7.2** | | 484.3 | 592.7 | 247.2 | 66.9 |
| 29500.0 | 314.6 | -43.0 | | | 476.2 | 591.1 | 247.1 | 65.7 |
| 30000.0 | 307.6 | -44.3 | | | 468.2 | 589.4 | 246.9 | 65.2 |
| 30500.0 | 300.7 | -45.6 | | | 460.3 | 587.7 | 246.6 | 64.6 |
| 31000.0 | 293.9 | -46.7 | | | 452.1 | 586.2 | 245.8 | 63.4 |
| 31500.0 | 287.1 | -47.9 | | | 444.0 | 584.7 | 245.1 | 63.0 |
| 32000.0 | 280.5 | -49.0 | | | 436.0 | 583.2 | 244.4 | 63.1 |
| 32500.0 | 274.1 | -50.2 | | | 428.1 | 581.7 | 244.1 | 63.4 |
| 33000.0 | 267.8 | -51.3 | | | 420.5 | 580.2 | 243.7 | 63.7 |
| 33500.0 | 261.6 | -52.5 | | | 412.9 | 578.7 | 243.9 | 65.0 |
| 34000.0 | 255.6 | -53.6 | | | 405.6 | 577.2 | 244.3 | 66.5 |
| 34500.0 | 249.7 | -54.6 | | | 398.3 | 575.7 | 244.4 | 67.3 |
| 35000.0 | 243.8 | -55.8 | | | 390.8 | 574.4 | 244.5 | 67.7 |
| 35500.0 | 238.1 | -56.8 | | | 383.4 | 573.0 | 244.4 | 67.3 |
| 36000.0 | 232.4 | -57.7 | | | 375.8 | 571.9 | 243.7 | 65.0 |
| 36500.0 | 226.9 | -56.3 | | | 364.6 | 573.6 | 243.0 | 62.7 |
| 37000.0 | 221.5 | -57.0 | | | 357.1 | 572.7 | 242.3 | 62.4 |
| 37500.0 | 216.2 | -57.7 | | | 349.7 | 571.8 | 241.6 | 62.1 |
| 38000.0 | 211.1 | -58.4 | | | 342.5 | 570.9 | 242.3 | 65.4 |
| 38500.0 | 206.1 | -59.1 | | | 335.4 | 569.9 | 243.2 | 69.5 |
| 39000.0 | 201.2 | -59.8 | | | 328.5 | 569.0 | 244.5 | 73.1 |
| 39500.0 | 196.3 | -59.9 | | | 320.7 | 568.9 | 246.1 | 76.5 |
| 40000.0 | 191.6 | -59.8 | | | 312.9 | 569.1 | 247.4 | 79.2 |
| 40500.0 | 187.0 | -59.6 | | | 305.2 | 569.3 | 248.0 | 78.8 |
| 41000.0 | 182.6 | -59.3 | | | 297.3 | 569.8 | 248.7 | 78.4 |
| 41500.0 | 178.2 | -58.8 | | | 289.6 | 570.4 | 248.8 | 76.8 |
| 42000.0 | 174.0 | -58.3 | | | 282.1 | 571.0 | 248.6 | 74.7 |
| 42500.0 | 169.8 | -58.2 | | | 275.2 | 571.2 | 248.4 | 73.0 |
| 43000.0 | 165.8 | -58.7 | | | 269.3 | 570.5 | 248.2 | 71.7 |
| 43500.0 | 161.8 | -56.7 | | | 260.4 | 573.1 | 248.2 | 71.1 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4126.59 FFET MSL
 31 MAR. 81 0655 IRS MST
 ASCENSION NO. 53

UPPER AIR DATA
 0900010053
 HOLLOWAY
 TABLE 13 cont'

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREE C | DEPOINT CENTIGRADE | REL.HUM. PERCENT | SPEED OF SOUND METER | DIRECTION DEGREES (TN) | WIND DATA KNOTS | INDEX OF REFRACTION |
|--------------------------------|-----------------------|-----------------------------|-----------------------|---------------------|----------------------------|---------------------------|--------------------|---------------------------|
| 44000.0 | 156.0 | -56.8 | | 254.4 | 573.0 | 248.6 | 72.1 | 1.000057 |
| 44500.0 | 154.2 | -57.0 | | 248.5 | 572.8 | 249.0 | 73.3 | 1.000055 |
| 45000.0 | 150.6 | -57.1 | | 242.8 | 572.7 | 249.9 | 75.9 | 1.000054 |
| 45500.0 | 147.0 | -57.4 | | 237.4 | 572.2 | 250.6 | 77.7 | 1.000053 |
| 46000.0 | 143.5 | -57.8 | | 232.1 | 571.7 | 250.7 | 76.0 | 1.000052 |
| 46500.0 | 140.1 | -58.2 | | 227.0 | 571.2 | 250.7 | 73.9 | 1.000051 |
| 47000.0 | 136.8 | -58.6 | | 222.0 | 570.7 | 250.1 | 69.4 | 1.000049 |
| 47500.0 | 133.5 | -58.9 | | 217.1 | 570.2 | 249.3 | 64.9 | 1.000048 |
| 48000.0 | 130.3 | -59.3 | | 212.3 | 569.7 | 248.2 | 62.0 | 1.000047 |
| 48500.0 | 127.2 | -59.6 | | 207.5 | 569.3 | 247.0 | 59.1 | 1.000046 |
| 49000.0 | 124.2 | -59.6 | | 202.5 | 569.3 | 246.3 | 59.7 | 1.000045 |
| 49500.0 | 121.2 | -59.6 | | 197.7 | 569.3 | 245.7 | 60.5 | 1.000044 |
| 50000.0 | 118.3 | -59.6 | | 193.0 | 569.3 | 245.5 | 62.6 | 1.000043 |
| 50500.0 | 115.5 | -59.2 | | 188.0 | 569.8 | 245.5 | 64.9 | 1.000042 |
| 51000.0 | 112.7 | -58.6 | | 183.0 | 570.6 | 245.5 | 66.6 | 1.000041 |
| 51500.0 | 110.0 | -58.0 | | 178.2 | 571.4 | 245.7 | 67.6 | 1.000040 |
| 52000.0 | 107.4 | -58.2 | | 174.0 | 571.2 | 245.9 | 68.4 | 1.000039 |
| 52500.0 | 104.8 | -58.7 | | 170.3 | 570.5 | 246.5 | 66.4 | 1.000038 |
| 53000.0 | 102.3 | -59.3 | | 166.7 | 569.7 | 247.1 | 64.4 | 1.000037 |
| 53500.0 | 99.9 | -59.8 | | 163.1 | 569.0 | 247.0 | 60.9 | 1.000036 |
| 54000.0 | 97.5 | -60.1 | | 159.4 | 568.6 | 248.7 | 56.7 | 1.000036 |
| 54500.0 | 95.1 | -60.5 | | 155.8 | 568.1 | 249.6 | 52.9 | 1.000035 |
| 55000.0 | 92.8 | -60.8 | | 152.3 | 567.7 | 250.3 | 50.0 | 1.000034 |
| 55500.0 | 90.6 | -61.1 | | 148.9 | 567.3 | 251.0 | 47.2 | 1.000033 |
| 56000.0 | 88.4 | -61.5 | | 145.5 | 566.8 | 250.7 | 45.4 | 1.000032 |
| 56500.0 | 85.3 | -61.8 | | 142.2 | 566.4 | 250.1 | 43.8 | 1.000032 |
| 57000.0 | 84.2 | -62.1 | | 139.0 | 565.9 | 248.8 | 43.0 | 1.000031 |
| 57500.0 | 82.2 | -62.4 | | 135.9 | 565.5 | 246.5 | 43.3 | 1.000030 |
| 58000.0 | 80.2 | -62.4 | | 132.6 | 565.5 | 244.2 | 43.0 | 1.000030 |
| 58500.0 | 78.3 | -62.1 | | 129.1 | 566.0 | 241.5 | 44.9 | 1.000029 |
| 59000.0 | 76.4 | -61.7 | | 125.8 | 566.0 | 238.6 | 46.3 | 1.000028 |
| 59500.0 | 74.5 | -61.3 | | 122.6 | 567.0 | 236.7 | 46.1 | 1.000027 |
| 60000.0 | 72.7 | -61.0 | | 119.4 | 567.5 | 235.1 | 42.5 | 1.000027 |
| 60500.0 | 71.0 | -60.6 | | 116.3 | 568.0 | 233.2 | 39.0 | 1.000026 |
| 61000.0 | 69.3 | -60.2 | | 113.3 | 568.0 | 234.3 | 32.6 | 1.000025 |
| 61500.0 | 67.6 | -59.7 | | 110.3 | 569.2 | 237.3 | 25.8 | 1.000025 |
| 62000.0 | 65.0 | -59.2 | | 107.5 | 569.8 | 241.7 | 19.6 | 1.000024 |
| 62500.0 | 64.4 | -58.7 | | 104.7 | 370.5 | 260.8 | 18.2 | 1.000023 |
| 63000.0 | 62.9 | -58.3 | | 102.0 | 571.0 | 200.0 | 17.2 | 1.000023 |
| 63500.0 | 61.4 | -58.4 | | 99.6 | 571.0 | 262.6 | 17.2 | 1.000022 |

STATION ALTITUDE 4126.59 FEET A.S.L.
31 MAR. 1965 HRS. MST
ASCENSION NO. 53

UPPER AIR DATA
0900010055
TABLE 13 cont'

EODETIC COORDINATES
32.88865 LAT DEG
106.09965 LONG DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE DEGREES CENTIGRADE | AIR DEPOINT CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF WIND DATA KNOTS | DIRECTION DEGREES (TN) | SPEED KNOTS | INDEX OF REFRACTION |
|--------------------------------|-----------------------|-----------------------------------|---------------------------|----------------------|---------------------------|--------------------------------|---------------------------|----------------|---------------------------|
| 64000.0 | 59.9 | -58.4 | | | 97.2 | 570.9 | 256.7 | 18.1 | 1.000022 |
| 64500.0 | 58.5 | -58.5 | | | 94.9 | 570.8 | 251.5 | 19.2 | 1.000021 |
| 65000.0 | 57.1 | -58.5 | | | 92.7 | 570.7 | 243.9 | 20.4 | 1.000021 |
| 65500.0 | 55.8 | -58.6 | | | 90.5 | 570.7 | 236.5 | 21.9 | 1.000020 |
| 66000.0 | 54.4 | -59.3 | | | 88.6 | 569.8 | 231.2 | 23.8 | 1.000020 |
| 66500.0 | 53.1 | -60.2 | | | 86.9 | 568.6 | 229.6 | 25.9 | 1.000019 |
| 67000.0 | 51.8 | -61.1 | | | 85.1 | 567.5 | 228.2 | 28.0 | 1.000019 |
| 67500.0 | 50.6 | -62.0 | | | 83.5 | 566.1 | 226.6 | 26.9 | 1.000019 |
| 68000.0 | 49.4 | -61.5 | | | 81.3 | 566.8 | 224.5 | 24.5 | 1.000018 |
| 68500.0 | 48.2 | -59.7 | | | 78.7 | 569.2 | 222.0 | 21.9 | 1.000018 |
| 69000.0 | 47.1 | -57.9 | | | 76.2 | 571.5 | 224.0 | 18.3 | 1.000017 |
| 69500.0 | 46.0 | -56.2 | | | 73.8 | 573.9 | 226.1 | 14.7 | 1.000016 |
| 70000.0 | 44.9 | -54.4 | | | 71.5 | 576.2 | 235.7 | 13.0 | 1.000016 |
| 70500.0 | 43.8 | -52.6 | | | 69.2 | 578.5 | 244.5 | 12.8 | 1.000015 |
| 71000.0 | 42.8 | -53.1 | | | 67.7 | 577.9 | 255.4 | 13.0 | 1.000015 |
| 71500.0 | 41.8 | -53.7 | | | 65.3 | 577.2 | 260.3 | 13.5 | 1.000015 |
| 72000.0 | 40.8 | -54.8 | | | 64.9 | 576.5 | 264.0 | 14.1 | 1.000014 |
| 72500.0 | 39.9 | -54.7 | | | 63.6 | 575.8 | 267.5 | 14.7 | 1.000014 |
| 73000.0 | 38.9 | -54.9 | | | 62.2 | 575.6 | 266.3 | 14.7 | 1.000014 |
| 73500.0 | 38.0 | -54.1 | | | 60.5 | 576.6 | 265.2 | 14.8 | 1.000013 |
| 74000.0 | 37.2 | -53.4 | | | 58.9 | 577.6 | 264.0 | 14.6 | 1.000013 |
| 74500.0 | 36.3 | -52.6 | | | 57.3 | 578.5 | 262.6 | 13.5 | 1.000013 |
| 75000.0 | 35.5 | -51.8 | | | 55.8 | 579.5 | 261.3 | 12.5 | 1.000012 |
| 75500.0 | 34.6 | -51.1 | | | 54.3 | 580.5 | 260.3 | 10.9 | 1.000012 |
| 76000.0 | 33.8 | -50.3 | | | 52.9 | 581.5 | 260.6 | 8.5 | 1.000012 |
| 76500.0 | 33.1 | -50.3 | | | 51.7 | 581.6 | 261.1 | 6.1 | 1.000012 |
| 77000.0 | 32.3 | -50.6 | | | 50.6 | 581.2 | 259.7 | 4.2 | 1.000011 |
| 77500.0 | 31.6 | -50.8 | | | 49.5 | 580.9 | 253.3 | 2.8 | 1.000011 |
| 78000.0 | 30.8 | -51.1 | | | 48.4 | 580.5 | 236.6 | 1.6 | 1.000011 |
| 78500.0 | 30.1 | -51.4 | | | 47.3 | 580.2 | 213.9 | 1.5 | 1.000011 |
| 79000.0 | 29.4 | -50.9 | | | 46.2 | 580.7 | 208.4 | 2.0 | 1.000010 |
| 79500.0 | 28.8 | -50.4 | | | 45.0 | 581.5 | 205.2 | 2.5 | 1.000010 |
| 80000.0 | 28.1 | -49.6 | | | 43.9 | 582.2 | 209.1 | 2.9 | 1.000010 |
| 80500.0 | 27.5 | -49.2 | | | 42.8 | 583.0 | 217.1 | 3.2 | 1.000010 |
| 81000.0 | 26.9 | -48.7 | | | 41.7 | 583.7 | 223.5 | 3.6 | 1.000009 |
| 81500.0 | 26.3 | -48.1 | | | 40.6 | 584.4 | 231.0 | 3.9 | 1.000009 |
| 82000.0 | 25.7 | -47.5 | | | 39.6 | 585.2 | 242.1 | 4.1 | 1.000009 |
| 82500.0 | 25.1 | -47.0 | | | 38.6 | 585.9 | 250.9 | 4.5 | 1.000009 |
| 83000.0 | 24.5 | -46.4 | | | 37.7 | 586.6 | 258.1 | 4.7 | 1.000008 |
| 83500.0 | 24.0 | -45.8 | | | 36.7 | 587.4 | 264.9 | 4.5 | 1.000008 |

STATION ALTITUDE 4126.59 FEET MSL
 31 MAR. 61 0655 HRS MST
 ASCENSION NO. 53

UPPLR AIR DATA
 0900010053
 HOLLOWMAN

TABLE 13 cont'

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES | DEWPOINT CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | DIRECTION DEGREES (IN) KNOTS | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|-------------------------|---------------------|------------------|------------------------|----------------------|------------------------------|-----------------------|---------------------|
| 84000.0 | 23.4 | -45.3 | | | 35.8 | 548.1 | 272.3 | 4.4 | 1.000008 |
| 84500.0 | 22.9 | -44.7 | | | 34.9 | 548.8 | 277.0 | 4.1 | 1.000008 |
| 85000.0 | 22.4 | -44.8 | | | 34.1 | 548.7 | 277.0 | 3.2 | 1.000008 |
| 85500.0 | 21.9 | -45.0 | | | 33.4 | 548.4 | 276.0 | 2.4 | 1.000007 |
| 86000.0 | 21.4 | -45.2 | | | 32.7 | 548.1 | 269.3 | 1.7 | 1.000007 |
| 86500.0 | 20.9 | -45.5 | | | 32.0 | 547.8 | 245.6 | 2.1 | 1.000007 |
| 87000.0 | 20.4 | -45.7 | | | 31.3 | 547.6 | 231.9 | 2.6 | 1.000007 |
| 87500.0 | 20.0 | -45.9 | | | 30.6 | 547.3 | 224.5 | 3.6 | 1.000007 |
| 88000.0 | 19.5 | -45.5 | | | 29.9 | 547.0 | 232.4 | 5.0 | 1.000007 |
| 88500.0 | 19.1 | -45.2 | | | 29.2 | 548.2 | 236.6 | 6.5 | 1.000006 |
| 89000.0 | 18.7 | -44.8 | | | 28.5 | 548.7 | 239.5 | 8.0 | 1.000006 |
| 89500.0 | 18.3 | -44.4 | | | 27.8 | 549.2 | | | 1.000006 |
| 90000.0 | 17.8 | -44.1 | | | 27.1 | 549.6 | | | 1.000006 |
| 90500.0 | 17.4 | -43.7 | | | 26.5 | 549.1 | | | 1.000006 |
| 91000.0 | 17.1 | -43.4 | | | 25.9 | 549.6 | | | 1.000006 |

GEODETIC COORDINATES
 32° 08' 06" LAT DEG
 106° 09' 06" LON DEG

STATION ALTITUDE 4126.59 FEET MSL
 31 MAR. '51 0655 HRS MST
 ASCENSION NO. 53

MANDATORY LEVELS
 0900010053
 HOLLOWMAN
 TABLE 14

GEODETIC COORDINATES
 32°48'86" LAT DEG
 106°09'65" LON DEG

| PRESSURE MILLIBARS | GEO-POTENTIAL FEET | TEMPERATURE DEGREES | REL. HUM. PERCENT | WIND DATA | |
|-----------------------|-----------------------|------------------------|----------------------|---------------|---------------------------|
| | | | | AIR DEPTHT | DIRECTION DEGREES (TN) |
| 850.0 | 4958. | 10.6 | -3.0 | 36. | 3•2 |
| 800.0 | 6603. | 6.8 | -5.9 | 40. | 341•3 |
| 750.0 | 8330. | 2.7 | -8.4 | 44. | 282•0 |
| 700.0 | 10147. | -1.6 | -11.1 | 48. | 269•0 |
| 650.0 | 12072. | -4.3 | -22.7 | 22. | 277•7 |
| 600.0 | 14126. | -8.5 | -26.6 | 21. | 272•1 |
| 550.0 | 16319. | -13.5 | -29.7 | 24. | 269•0 |
| 500.0 | 18672. | -19.1 | -33.3 | 27. | 262•9 |
| 450.0 | 21223. | -24.0 | -38.0 | 26. | 251•4 |
| 400.0 | 24002. | -31.3 | -42.8 | 31. | 251•7 |
| 350.0 | 27067. | -38.0 | -47.1 | 37. | 249•0 |
| 300.0 | 30496. | -45.7 | | | 246•5 |
| 250.0 | 34403. | -54.7 | | | 64•5 |
| 200.0 | 39029. | -60.0 | | | 244•4 |
| 175.0 | 41771. | -56.4 | | | 67•2 |
| 150.0 | 44965. | -57.1 | | | 56.5 |
| 125.0 | 48725. | -59.6 | | | 57.6 |
| 100.0 | 53317. | -59.8 | | | 75•3 |
| 80.0 | 57861. | -62.4 | | | 248•7 |
| 70.0 | 60578. | -60.4 | | | 250•0 |
| 60.0 | 63750. | -58.4 | | | 76•2 |
| 50.0 | 67491. | -62.4 | | | 246•5 |
| 40.0 | 72149. | -54.6 | | | 59.5 |
| 30.0 | 78262. | -51.4 | | | 247.7 |
| 25.0 | 82187. | -46.9 | | | 61•3 |
| 20.0 | 87070. | -45.9 | | | 43•8 |

STATION ALTITUDE 4051.00 FEET MSL
31 MAR. 81 0655 HRS. MST
ASCENSION NO. 17

SIGNIFICANT LEVEL DATA
090000Z0017
JALLEN
TABLE 15

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE DEGREES | DEWPOINT CENTIGRADE | REL.HUM. PERCENT |
|-----------------------|-----------------------------------|------------------------|------------------------|---------------------|
| 870.6 | 4051.0 | 6.8 | -9.1 | 51.0 |
| 863.4 | 4524.1 | 0.7 | -3.2 | 40.0 |
| 850.0 | 4949.8 | 8.7 | -4.1 | 40.0 |
| 745.2 | 8480.6 | 1.9 | -10.2 | 40.0 |
| 700.0 | 10126.9 | -2.1 | -12.7 | 44.0 |
| 649.8 | 12053.1 | -6.9 | -16.0 | 48.0 |
| 640.2 | 12434.6 | -7.3 | -23.0 | 27.0 |
| 631.2 | 12797.1 | -7.3 | -24.6 | 23.0 |
| 585.8 | 14697.5 | -10.3 | -26.9 | 24.0 |
| 500.0 | 18637.3 | -19.5 | -32.6 | 30.0 |
| 427.6 | 22396.8 | -27.9 | -38.8 | 34.0 |
| 400.0 | 23963.9 | -31.0 | -38.2 | 49.0 |
| 328.0 | 28495.6 | -41.5 | -49.7 | 40.0 |
| 300.0 | 30466.4 | -46.7 | | |
| 273.0 | 32504.0 | -51.5 | | |

STATION ALTITUDE 4051.00 FEET MSL
 31 MAR. A1 0655 IRS MST
 ASCENSION NO. 17

UPPER AIR DATA
 0900030017
 JALLEN
 TABLE 16

GEODETIC COORDINATES
 33.1671° LAT DEG
 106.4951° LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | REL. HUM. PERCENT | SPEED OF SOUND KNOTS | WIND DATA DIR. (DEGREES) SPEED KNOTS | INDEX OF REFRACTION |
|--------------------------------|-----------------------|--|----------------------|----------------------------|---|---------------------------|
| 4051.0 | 878.6 | 6.8 | -9.1 | 31.0 | 1091.9 | 652.3 |
| 4500.0 | 864.2 | 9.6 | -3.5 | 39.5 | 1062.7 | 655.7 |
| 5000.0 | 848.4 | 8.6 | -4.2 | 40.0 | 1046.9 | 654.6 |
| 5500.0 | 832.7 | 7.6 | -5.1 | 40.0 | 1031.2 | 653.4 |
| 6000.0 | 817.4 | 6.7 | -5.9 | 40.0 | 1015.7 | 652.3 |
| 6500.0 | 802.3 | 5.7 | -6.8 | 40.0 | 1000.5 | 651.1 |
| 7000.0 | 787.5 | 4.8 | -7.7 | 40.0 | 985.5 | 650.0 |
| 7500.0 | 772.9 | 3.8 | -8.5 | 40.0 | 970.8 | 648.8 |
| 8000.0 | 758.7 | 2.8 | -9.4 | 40.0 | 956.2 | 647.7 |
| 8500.0 | 744.7 | 1.9 | -10.3 | 40.0 | 942.0 | 646.5 |
| 9000.0 | 730.6 | .6 | -11.0 | 41.3 | 928.4 | 645.1 |
| 9500.0 | 716.9 | -.6 | -11.7 | 42.5 | 915.0 | 643.6 |
| 10000.0 | 703.4 | -1.8 | -12.5 | 43.7 | 901.9 | 642.2 |
| 10500.0 | 690.0 | -3.0 | -13.3 | 44.8 | 888.8 | 640.7 |
| 11000.0 | 676.8 | -4.3 | -14.2 | 45.8 | 875.9 | 639.2 |
| 11500.0 | 663.6 | -5.5 | -15.1 | 46.9 | 863.2 | 637.7 |
| 12000.0 | 651.1 | -6.8 | -15.9 | 47.9 | 850.7 | 636.0 |
| 12500.0 | 638.6 | -7.3 | -23.3 | 26.3 | 836.3 | 635.4 |
| 13000.0 | 626.2 | -7.6 | -25.0 | 23.1 | 821.1 | 635.0 |
| 13500.0 | 614.0 | -8.4 | -25.6 | 23.4 | 807.6 | 634.0 |
| 14000.0 | 602.1 | -9.2 | -26.2 | 23.6 | 794.3 | 633.1 |
| 14500.0 | 590.4 | -10.0 | -26.7 | 23.9 | 781.2 | 632.1 |
| 15000.0 | 578.7 | -11.0 | -27.3 | 24.5 | 768.7 | 630.9 |
| 15500.0 | 567.2 | -12.2 | -28.0 | 25.2 | 756.8 | 629.5 |
| 16000.0 | 555.9 | -13.3 | -28.7 | 26.0 | 745.1 | 628.1 |
| 16500.0 | 544.9 | -14.5 | -29.4 | 26.7 | 733.6 | 626.0 |
| 17000.0 | 534.0 | -15.7 | -30.1 | 27.5 | 722.3 | 625.2 |
| 17500.0 | 523.4 | -16.8 | -30.9 | 28.3 | 711.1 | 623.8 |
| 18000.0 | 513.0 | -18.0 | -31.6 | 29.0 | 700.2 | 622.4 |
| 18500.0 | 502.8 | -19.2 | -32.4 | 29.8 | 689.4 | 620.9 |
| 19000.0 | 492.5 | -20.3 | -33.2 | 30.4 | 678.4 | 619.6 |
| 19500.0 | 482.4 | -21.4 | -34.0 | 30.9 | 667.4 | 618.2 |
| 20000.0 | 472.4 | -22.5 | -34.8 | 31.4 | 656.6 | 616.8 |
| 20500.0 | 462.7 | -23.7 | -35.6 | 32.0 | 645.9 | 615.4 |
| 21000.0 | 453.2 | -24.8 | -36.5 | 32.5 | 635.5 | 614.0 |
| 21500.0 | 443.9 | -25.9 | -37.3 | 33.0 | 625.2 | 612.6 |
| 22000.0 | 434.7 | -27.0 | -38.2 | 33.6 | 615.2 | 611.3 |
| 22500.0 | 425.7 | -28.1 | -38.7 | 35.0 | 605.1 | 610.9 |
| 23000.0 | 416.8 | -29.1 | -38.4 | 39.8 | 594.8 | 608.7 |
| 23500.0 | 408.0 | -30.1 | -38.2 | 40.6 | 584.6 | 607.4 |

STATION ALTITUDE 4051.00 FEET MSL
 31 MAR. 81 0655 IRS MST
 ASCENSION NO. 17

UPPER AIR DATA
 0900030017
 JALLEN
 TABLE 16 cont'

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES | DEWPOINT CENTIGRADE | REL. HUM. PERCENT | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES (TN) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|-------------------------|---------------------|-------------------|----------------------|----------------------------------|-----------------------|---------------------|
| 24000.0 | 399.4 | -31.1 | -30.2 | 48.9 | 574.6 | 606.2 | 254.6 | 68.2 |
| 24500.0 | 390.7 | -32.2 | -39.5 | 47.9 | 564.9 | 604.7 | 255.2 | 69.0 |
| 25000.0 | 382.3 | -33.4 | -40.8 | 46.9 | 555.3 | 603.3 | 256.0 | 69.5 |
| 25500.0 | 374.0 | -34.6 | -42.1 | 45.9 | 546.0 | 601.8 | 256.6 | 68.9 |
| 26000.0 | 365.9 | -35.7 | -43.3 | 45.0 | 536.8 | 600.3 | 257.1 | 68.1 |
| 26500.0 | 356.0 | -36.9 | -44.6 | 44.0 | 527.7 | 598.9 | 256.6 | 67.7 |
| 27000.0 | 350.2 | -38.0 | -45.9 | 43.0 | 518.8 | 597.4 | 256.0 | 67.3 |
| 27500.0 | 342.6 | -39.2 | -47.2 | 42.0 | 510.1 | 595.9 | 254.6 | 67.5 |
| 28000.0 | 335.2 | -40.4 | -48.4 | 41.0 | 501.6 | 594.4 | 253.3 | 68.1 |
| 28500.0 | 327.9 | -41.5 | -49.7 | 39.9** | 493.2 | 592.9 | 251.0 | 69.7 |
| 29000.0 | 320.6 | -42.8 | -53.4 | 29.8** | 484.9 | 591.2 | 250.5 | 71.1 |
| 29500.0 | 313.4 | -44.1 | -57.0 | 19.6** | 476.8 | 589.5 | 249.4 | 72.0 |
| 30000.0 | 306.4 | -45.5 | -64.5 | 9.5** | 468.8 | 587.8 | 248.4 | 72.7 |
| 30500.0 | 299.5 | -46.8 | | | 461.0 | 586.1 | 247.8 | 73.0 |
| 31000.0 | 292.7 | -48.0 | | | 452.8 | 584.6 | 247.3 | 74.1 |
| 31500.0 | 286.0 | -49.1 | | | 444.7 | 583.1 | 247.0 | 76.0 |
| 32000.0 | 279.4 | -50.3 | | | 436.9 | 581.6 | 249.1 | 77.7 |
| 32500.0 | 273.1 | -51.5 | | | 429.1 | 580.0 | | 1.000096 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
 31 MAR. 01 0655 HRS. MST
 ASCENSION I.O. 17

MANDATORY LEVELS
 0900030017
 JALLEF N
 TABLE 17

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

| PRESSURE MILLIBARS | GEOPOTENTIAL FEET | TEMPERATURE | | RH% • HUM. PERCENT | WIND DATA DIRECTION DEGREES(TN) | SPEED KNOTS |
|-----------------------|----------------------|-------------|------------|-----------------------|---------------------------------------|----------------|
| | | DEGREES | CENTIGRAVE | | | |
| 850.0 | 4946. | 8.7 | -4.1 | 40. | 323.9 | 2.9 |
| 800.0 | 6582. | 5.6 | -6.9 | 40. | 304.8 | 7.0 |
| 750.0 | 8303. | 2.2 | -9.9 | 40. | 274.5 | 15.7 |
| 700.0 | 10118. | -2.1 | -12.7 | 44. | 254.7 | 20.9 |
| 650.0 | 12033. | -6.9 | -16.0 | 48. | 272.3 | 31.3 |
| 600.0 | 14074. | -9.3 | -26.3 | 24. | 276.0 | 41.5 |
| 550.0 | 16263. | -14.0 | -29.1 | 26. | 267.1 | 42.2 |
| 500.0 | 18613. | -19.5 | -32.6 | 30. | 270.1 | 44.0 |
| 450.0 | 21153. | -25.2 | -36.8 | 33. | 252.0 | 59.1 |
| 400.0 | 23926. | -31.0 | -38.2 | 49. | 254.6 | 68.1 |
| 350.0 | 26989. | -38.1 | -45.9 | 43. | 255.9 | 67.3 |
| 300.0 | 30409. | -46.7 | -46.7 | 247.8 | 73.0 | |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
31 MAR. 01
ASCENSION NO. 18

SIGNIFICANT LEVEL DATA
0900030018
JALLEN
TABLE 18

GEOGRAPHIC COORDINATES
33°16'12" LAT DEG
106°49'51" LON DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE DEGREES CENTIGRADE | AIR DEWPOINT CENTIGRADE | REL. HUM. PERCENT |
|-----------------------|-----------------------------------|-----------------------------------|----------------------------|----------------------|
| 879.6 | 4051.0 | 13.9 | -10.7 | 17.0 |
| 870.0 | 4353.4 | 11.9 | -3.4 | 34.0 |
| 850.0 | 4989.9 | 9.8 | -5.3 | 34.0 |
| 726.2 | 9206.1 | -2 | -10.4 | 46.0 |
| 700.0 | 10169.7 | -1.7 | -15.5 | 34.0 |
| 651.8 | 12024.7 | -4.7 | -22.1 | 24.0 |
| 598.2 | 14227.8 | -8.5 | -24.5 | 26.0 |
| 500.0 | 18701.7 | -19.8 | -32.2 | 32.0 |
| 466.8 | 20365.6 | -23.8 | -34.3 | 37.0 |
| 451.2 | 21180.6 | -24.8 | -35.5 | 36.0 |
| 400.0 | 24026.1 | -31.2 | -42.4 | 32.0 |
| 338.2 | 27869.7 | -39.9 | -50.4 | 31.0 |
| 300.0 | 30526.9 | -46.5 | | |
| 250.0 | 34429.5 | -55.9 | | |
| 216.8 | 37386.2 | -60.2 | | |
| 207.4 | 38300.0 | -58.8 | | |
| 200.0 | 39049.9 | -59.7 | | |
| 197.8 | 39277.7 | -59.8 | | |
| 184.0 | 40785.0 | -54.6 | | |
| 175.2 | 41814.8 | -56.3 | | |
| 150.0 | 45070.4 | -55.7 | | |
| 106.8 | 52094.8 | -62.4 | | |
| 100.0 | 53437.4 | -61.5 | | |
| 91.0 | 55366.5 | -61.5 | | |
| 76.0 | 59118.9 | -53.8 | | |
| 70.0 | 60851.3 | -56.8 | | |
| 56.8 | 65144.1 | -64.7 | | |
| 50.0 | 67782.5 | -53.9 | | |
| 43.4 | 70776.8 | -55.3 | | |
| 40.8 | 72084.0 | -53.8 | | |
| 35.2 | 75220.9 | -53.6 | | |
| 30.0 | 78652.4 | -49.4 | | |
| 24.4 | 83151.6 | -47.4 | | |

STATION ALTITUDE 4051.00 FEET MSL
 31 MAR. 61 0918 IRS MST
 ASCENSION NO. 18

UPPER AIR DATA
 090003001B
 JALLEN
 TABLE 19

GEODETIC COORDINATES
 33.1671° LAT DEG
 106.49511 LON IEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES | DEWPOINT CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND IN KNOTS | WIND DIRECTION DEGREES (TN) | WIND SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|-------------------------|---------------------|-------------------|------------------------|-------------------------|-----------------------------|------------------|---------------------|
| 4051.0 | 879.6 | 13.9 | -10.7 | 17.0 | 1066.3 | 660.4 | 270.0 | 1.9 | 1.000250 |
| 4500.0 | 865.4 | 11.4 | -3.9 | 34.0 | 1057.2 | 667.8 | 286.4 | 1.6 | 1.000257 |
| 5000.0 | 849.7 | 9.8 | -5.3 | 34.0 | 1044.3 | 655.9 | 310.5 | 1.5 | 1.000252 |
| 5500.0 | 834.0 | 8.6 | -5.8 | 35.5 | 1029.3 | 644.5 | 332.7 | 1.7 | 1.000248 |
| 6000.0 | 818.5 | 7.4 | -6.4 | 36.9 | 1014.6 | 633.1 | 323.0 | 3.1 | 1.000244 |
| 6500.0 | 803.4 | 6.2 | -6.9 | 38.3 | 1000.1 | 611.7 | 308.0 | 4.5 | 1.000240 |
| 7000.0 | 788.5 | 5.0 | -7.5 | 39.7 | 985.8 | 600.3 | 291.9 | 6.3 | 1.000237 |
| 7500.0 | 774.0 | 3.8 | -8.1 | 41.1 | 971.8 | 598.9 | 273.5 | 8.1 | 1.000233 |
| 8000.0 | 759.6 | 2.7 | -8.8 | 42.6 | 958.0 | 647.5 | 259.6 | 10.6 | 1.000229 |
| 8500.0 | 745.6 | 1.5 | -9.4 | 44.0 | 944.4 | 646.1 | 252.6 | 13.8 | 1.000225 |
| 9000.0 | 731.8 | .3 | -10.1 | 45.4 | 931.0 | 644.7 | 249.4 | 17.1 | 1.000222 |
| 9500.0 | 716.1 | -7 | -11.8 | 42.3 | 916.9 | 643.5 | 256.5 | 19.7 | 1.000217 |
| 10000.0 | 704.5 | -1.4 | -14.5 | 36.1 | 902.3 | 642.5 | 264.2 | 22.6 | 1.000211 |
| 10500.0 | 691.2 | -2.2 | -16.6 | 32.2 | 887.9 | 641.5 | 273.5 | 26.1 | 1.000206 |
| 11000.0 | 676.0 | -3.0 | -18.3 | 29.5 | 873.7 | 640.5 | 278.7 | 28.9 | 1.000202 |
| 11500.0 | 665.1 | -3.9 | -20.1 | 26.8 | 859.8 | 639.5 | 282.0 | 31.1 | 1.000198 |
| 12000.0 | 652.4 | -4.7 | -22.0 | 24.1 | 846.0 | 638.5 | 282.1 | 32.6 | 1.000194 |
| 12500.0 | 639.8 | -5.5 | -22.6 | 24.4 | 832.4 | 637.5 | 281.5 | 34.0 | 1.000191 |
| 13000.0 | 627.5 | -6.4 | -23.2 | 24.9 | 819.0 | 636.5 | 278.1 | 37.1 | 1.000187 |
| 13500.0 | 615.4 | -7.2 | -23.7 | 25.3 | 805.8 | 635.4 | 275.0 | 39.7 | 1.000184 |
| 14000.0 | 603.5 | -8.1 | -24.3 | 25.8 | 792.8 | 634.4 | 271.0 | 40.8 | 1.000181 |
| 14500.0 | 591.7 | -9.2 | -24.9 | 26.4 | 780.5 | 633.1 | 267.6 | 41.7 | 1.000178 |
| 15000.0 | 580.0 | -10.5 | -25.6 | 27.0 | 768.7 | 631.6 | 265.1 | 42.2 | 1.000175 |
| 15500.0 | 568.5 | -11.7 | -26.6 | 27.7 | 757.1 | 630.1 | 264.1 | 42.8 | 1.000172 |
| 16000.0 | 557.2 | -13.0 | -27.4 | 28.4 | 745.7 | 628.5 | 264.5 | 43.3 | 1.000170 |
| 16500.0 | 546.1 | -14.2 | -28.3 | 29.0 | 734.5 | 627.0 | 265.1 | 42.9 | 1.000167 |
| 17000.0 | 535.3 | -15.5 | -29.2 | 29.7 | 723.5 | 625.4 | 266.1 | 41.9 | 1.000164 |
| 17500.0 | 524.7 | -16.8 | -30.0 | 30.4 | 712.6 | 623.9 | 266.0 | 41.7 | 1.000162 |
| 18000.0 | 514.3 | -18.0 | -30.9 | 31.1 | 702.0 | 622.4 | 264.9 | 42.2 | 1.000159 |
| 18500.0 | 504.1 | -19.3 | -31.8 | 31.7 | 691.5 | 620.8 | 263.1 | 44.2 | 1.000156 |
| 19000.0 | 493.9 | -20.5 | -32.6 | 32.9 | 680.0 | 619.3 | 261.1 | 46.9 | 1.000154 |
| 19500.0 | 482.8 | -21.7 | -33.2 | 34.4 | 670.1 | 617.6 | 259.7 | 49.5 | 1.000151 |
| 20000.0 | 473.9 | -22.9 | -33.8 | 35.9 | 659.6 | 616.3 | 258.5 | 52.2 | 1.000149 |
| 20500.0 | 464.2 | -24.0 | -34.5 | 36.6 | 648.8 | 615.1 | 258.7 | 53.3 | 1.000146 |
| 21000.0 | 454.6 | -24.6 | -35.2 | 36.2 | 637.0 | 614.3 | 259.1 | 54.4 | 1.000144 |
| 21500.0 | 445.1 | -25.5 | -36.3 | 35.6 | 626.1 | 613.1 | 260.0 | 55.2 | 1.000141 |
| 22000.0 | 435.8 | -26.6 | -37.5 | 34.8 | 615.8 | 611.7 | 260.6 | 56.1 | 1.000139 |
| 22500.0 | 426.7 | -27.8 | -38.7 | 34.1 | 605.1 | 609.3 | 260.0 | 57.3 | 1.000136 |
| 23000.0 | 417.8 | -28.9 | -39.9 | 33.4 | 595.7 | 609.9 | 260.4 | 58.6 | 1.000134 |
| 23500.0 | 407.0 | -30.0 | -41.1 | 32.7 | 585.5 | 607.5 | 259.5 | 60.2 | 1.000132 |

STATION ALTITUDE 4051.00 FEET MSL
31 MAR. 61 0918 HRS MSL
ASCENSION NO. 18

UPPER AIR DATA
0900030018
JALLEN
TABLE 19 cont'

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE DEGREES | AIR DEPOINT CENTIGRADE | REL.HUM. PERCENT | GM/CURIC METER | SOUND NOPTS | DIRECTION DEGREES (TN) | WIND DATA KNOTS | INDEX OF REFRACTION |
|--------------------------------|-----------------------|------------------------|------------------------------|---------------------|-------------------|----------------|---------------------------|--------------------|---------------------------|
| 24000.0 | 400.4 | -31.1 | -42.3 | 32.0 | 576.3 | 606.1 | 258.4 | 61.6 | 1.000129 |
| 24500.0 | 391.8 | -32.3 | -43.4 | 31.9 | 566.6 | 604.7 | 257.1 | 62.9 | 1.000127 |
| 25000.0 | 383.3 | -33.4 | -44.4 | 31.7 | 557.0 | 603.2 | 256.4 | 64.0 | 1.000125 |
| 25500.0 | 375.1 | -34.5 | -45.5 | 31.6 | 547.5 | 601.8 | 255.9 | 65.1 | 1.000123 |
| 26000.0 | 367.0 | -35.7 | -46.5 | 31.5 | 538.3 | 600.4 | 255.3 | 66.3 | 1.000120 |
| 26500.0 | 359.0 | -36.8 | -47.6 | 31.4 | 529.2 | 599.7 | 254.7 | 67.7 | 1.000118 |
| 27000.0 | 351.3 | -37.9 | -48.6 | 31.2 | 520.2 | 597.5 | 253.5 | 68.7 | 1.000116 |
| 27500.0 | 343.7 | -39.1 | -49.7 | 31.1 | 511.5 | 596.1 | 251.7 | 69.5 | 1.000114 |
| 28000.0 | 336.2 | -40.2 | -51.2 | 29.5** | 502.8 | 594.6 | 250.0 | 70.2 | 1.000112 |
| 28500.0 | 328.7 | -41.5 | -54.1 | 23.6** | 494.2 | 593.0 | 248.4 | 70.8 | 1.000110 |
| 29000.0 | 321.4 | -42.7 | -57.4 | 17.8** | 485.8 | 591.4 | 247.6 | 70.7 | 1.000108 |
| 29500.0 | 314.2 | -43.9 | -61.5 | 12.0** | 477.6 | 589.8 | 247.3 | 70.1 | 1.000106 |
| 30000.0 | 307.2 | -45.2 | -67.4 | 6.1** | 469.5 | 588.2 | 247.5 | 69.4 | 1.000105 |
| 30500.0 | 300.4 | -46.4 | -86.8 | .3** | 461.5 | 586.6 | 248.0 | 68.5 | 1.000103 |
| 31000.0 | 293.4 | -47.6 | | | 453.3 | 585.0 | 248.4 | 69.0 | 1.000101 |
| 31500.0 | 286.7 | -48.8 | | | 445.2 | 583.5 | 248.7 | 70.5 | 1.000099 |
| 32000.0 | 280.0 | -50.0 | | | 437.3 | 581.9 | 248.8 | 72.3 | 1.000097 |
| 32500.0 | 273.6 | -51.3 | | | 429.5 | 580.3 | 248.9 | 74.4 | 1.000096 |
| 33000.0 | 267.3 | -52.5 | | | 421.9 | 578.7 | 249.3 | 75.8 | 1.000094 |
| 33500.0 | 261.1 | -53.7 | | | 414.4 | 577.2 | 249.9 | 76.2 | 1.000092 |
| 34000.0 | 255.1 | -54.9 | | | 407.1 | 575.6 | 250.7 | 76.5 | 1.000091 |
| 34500.0 | 249.2 | -56.0 | | | 399.7 | 574.1 | 251.8 | 76.6 | 1.000089 |
| 35000.0 | 243.2 | -56.7 | | | 391.5 | 573.1 | 252.7 | 76.7 | 1.000087 |
| 35500.0 | 237.4 | -57.5 | | | 383.5 | 572.2 | 253.0 | 76.9 | 1.000085 |
| 36000.0 | 231.8 | -58.2 | | | 375.6 | 571.2 | 253.1 | 77.0 | 1.000084 |
| 36500.0 | 226.3 | -58.9 | | | 367.9 | 570.2 | 252.4 | 76.4 | 1.000082 |
| 37000.0 | 220.9 | -59.6 | | | 360.4 | 569.3 | 251.6 | 75.8 | 1.000080 |
| 37500.0 | 215.6 | -60.0 | | | 352.4 | 568.7 | 250.9 | 74.6 | 1.000078 |
| 38000.0 | 210.4 | -59.3 | | | 342.7 | 569.8 | 250.2 | 73.4 | 1.000076 |
| 38500.0 | 205.4 | -59.0 | | | 334.2 | 570.1 | 250.0 | 72.7 | 1.000074 |
| 39000.0 | 200.5 | -59.6 | | | 327.1 | 569.5 | 249.8 | 71.9 | 1.000073 |
| 39500.0 | 195.7 | -59.0 | | | 318.4 | 570.1 | 249.9 | 71.0 | 1.000071 |
| 40000.0 | 191.1 | -57.3 | | | 308.4 | 572.4 | 250.0 | 70.0 | 1.000069 |
| 40500.0 | 186.5 | -55.6 | | | 298.7 | 574.6 | 250.5 | 68.5 | 1.000067 |
| 41000.0 | 182.1 | -55.0 | | | 290.8 | 575.5 | 250.6 | 67.0 | 1.000065 |
| 41500.0 | 177.8 | -55.8 | | | 285.0 | 574.4 | 250.4 | 66.0 | 1.000063 |
| 42000.0 | 173.7 | -56.3 | | | 278.9 | 573.7 | 251.0 | 65.5 | 1.000062 |
| 42500.0 | 169.6 | -56.2 | | | 272.2 | 573.9 | 251.2 | 64.9 | 1.000061 |
| 43000.0 | 165.6 | -56.1 | | | 265.7 | 574.0 | 251.1 | 64.3 | 1.000059 |
| 43500.0 | 161.7 | -56.0 | | | 254.3 | 574.1 | 251.1 | 63.6 | 1.000058 |

** AT LAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
 31 MAR. 61 0918 IRS MST
 ASCENSION NO. 18

UPPER AIR DATA
 0900030016
 JALLEN
 TABLE 19 cont'

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

| GEOMETRIC PRESSURE ALTITUDE MSL FEET | TEMPERATURE AIR DEGREES | DEWPOINT CENTIGRADE | REL. HUM. PERCENT | SPEED OF SOUND METER | WIND DATA DIRECTION DEGREES (TN) | SPEED KNOTS | INDEX OF REFRACTION |
|--|-------------------------------|------------------------|----------------------|----------------------------|--|----------------|---------------------------|
| 44000.0 C | 157.9 | -55.9 | 253.1 | 574.2 | 251.1 | 62.5 | 1.000056 |
| 44500.0 n | 154.1 | -55.8 | 247.1 | 574.3 | 251.2 | 61.1 | 1.000055 |
| 45000.0 n | 150.5 | -55.7 | 241.1 | 574.5 | 251.4 | 60.0 | 1.000054 |
| 45500.0 n | 149.9 | -56.1 | 235.8 | 573.9 | 252.1 | 60.0 | 1.000053 |
| 46000.0 n | 143.4 | -56.6 | 230.7 | 573.3 | 252.9 | 60.0 | 1.000051 |
| 46500.0 n | 140.0 | -57.1 | 225.7 | 572.7 | 250.9 | 62.2 | 1.000050 |
| 47000.0 n | 139.6 | -57.5 | 220.8 | 572.0 | 248.7 | 64.7 | 1.000049 |
| 47500.0 n | 133.4 | -58.0 | 216.0 | 571.4 | 246.2 | 67.0 | 1.000048 |
| 48000.0 n | 130.2 | -58.5 | 211.3 | 570.8 | 243.5 | 69.0 | 1.000047 |
| 48500.0 n | 127.1 | -59.0 | 206.7 | 570.1 | 240.0 | 71.1 | 1.000046 |
| 49000.0 n | 124.0 | -59.4 | 202.2 | 569.5 | 240.1 | 71.6 | 1.000045 |
| 49500.0 n | 121.1 | -59.9 | 197.8 | 568.9 | 241.4 | 70.5 | 1.000044 |
| 50000.0 n | 118.2 | -60.4 | 193.5 | 568.2 | 242.6 | 69.5 | 1.000043 |
| 50500.0 n | 115.4 | -60.9 | 189.3 | 567.6 | 245.5 | 69.5 | 1.000042 |
| 51000.0 n | 112.6 | -61.4 | 185.2 | 567.0 | 248.6 | 70.1 | 1.000041 |
| 51500.0 n | 109.9 | -61.8 | 181.2 | 566.3 | 251.3 | 70.8 | 1.000040 |
| 52000.0 n | 107.3 | -62.3 | 177.3 | 565.7 | 252.2 | 72.0 | 1.000039 |
| 52500.0 n | 104.7 | -62.1 | 172.8 | 565.9 | 253.0 | 73.2 | 1.000038 |
| 53000.0 n | 102.2 | -61.8 | 168.4 | 566.4 | 253.7 | 72.1 | 1.000038 |
| 53500.0 n | 99.7 | -61.5 | 164.1 | 566.8 | 254.2 | 68.5 | 1.000037 |
| 54000.0 n | 97.3 | -61.5 | 160.1 | 566.8 | 254.7 | 65.0 | 1.000036 |
| 54500.0 n | 94.9 | -61.5 | 156.3 | 566.8 | 255.0 | 61.6 | 1.000035 |
| 55000.0 n | 92.6 | -61.5 | 152.5 | 566.8 | 255.2 | 58.2 | 1.000034 |
| 55500.0 n | 90.4 | -61.2 | 148.6 | 567.1 | 255.1 | 55.7 | 1.000033 |
| 56000.0 n | 88.3 | -60.2 | 144.4 | 566.5 | 254.1 | 54.9 | 1.000032 |
| 56500.0 n | 86.2 | -59.2 | 140.3 | 569.9 | 253.2 | 54.1 | 1.000031 |
| 57000.0 n | 84.1 | -58.1 | 136.3 | 571.2 | 252.0 | 51.7 | 1.000030 |
| 57500.0 n | 82.1 | -57.1 | 132.5 | 572.6 | 250.7 | 48.9 | 1.000030 |
| 58000.0 n | 80.2 | -56.1 | 128.7 | 574.0 | 249.5 | 45.6 | 1.000029 |
| 58500.0 n | 78.3 | -55.1 | 125.1 | 575.3 | 248.7 | 41.3 | 1.000028 |
| 59000.0 n | 76.4 | -54.0 | 121.5 | 576.7 | 247.7 | 37.1 | 1.000027 |
| 59500.0 n | 74.6 | -54.5 | 118.9 | 576.1 | 246.4 | 31.6 | 1.000026 |
| 60000.0 n | 72.9 | -55.3 | 116.6 | 575.0 | 244.2 | 25.9 | 1.000026 |
| 60500.0 n | 71.2 | -56.2 | 114.3 | 573.8 | 241.4 | 20.7 | 1.000025 |
| 61000.0 n | 69.5 | -57.1 | 112.0 | 572.7 | 236.3 | 16.2 | 1.000025 |
| 61500.0 n | 67.8 | -58.0 | 109.8 | 571.4 | 227.3 | 11.9 | 1.000024 |
| 62000.0 n | 66.2 | -58.9 | 107.6 | 570.2 | 220.7 | 10.2 | 1.000024 |
| 62500.0 n | 64.6 | -59.8 | 105.5 | 569.0 | 220.7 | 10.5 | 1.000023 |
| 63000.0 n | 63.0 | -60.8 | 103.4 | 567.8 | 220.0 | 10.7 | 1.000023 |
| 63500.0 n | 61.5 | -61.7 | 101.4 | 566.5 | 220.4 | 12.9 | 1.000023 |

STATION ALTITUDE 4051.00 FEET MSL
 31 MAR. 61 0918 HRS MST
 ASCENSION NO. 18

UPPER AIR DATA
 0900030016

GEOGRAPHIC COORDINATES
 33.16712 LAT DEG
 106.49511 LONG DEG

JALLEN
 TABLE 19 cont'

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE DEGREES | REL. HUM. PERCENT | SOUND KNOTS | WIND DATA | | INDEX OF REFRACTION |
|--------------------------------|-----------------------|------------------------|----------------------|----------------|---------------|-----------------------|---------------------------|
| | | | | | AIR DEGREE | DEGREES CENTIGRADE | |
| 64000.0 | 60.1 | -62.6 | 99.4 | 565.3 | 291.6 | 15.9 | 1.000022 |
| 64500.0 | 58.6 | -63.5 | 97.4 | 564.1 | 235.1 | 18.9 | 1.000022 |
| 65000.0 | 57.2 | -64.4 | 95.5 | 562.8 | 236.7 | 22.7 | 1.000021 |
| 65500.0 | 55.8 | -65.2 | 92.7 | 564.4 | 237.9 | 26.5 | 1.000021 |
| 66000.0 | 54.5 | -61.2 | 89.6 | 567.2 | 38.7 | 30.3 | 1.000020 |
| 66500.0 | 53.2 | -59.1 | 86.6 | 569.9 | 239.9 | 33.1 | 1.000019 |
| 67000.0 | 51.9 | -57.1 | 83.7 | 572.6 | 240.9 | 35.9 | 1.000018 |
| 67500.0 | 50.7 | -55.1 | 81.0 | 575.3 | | | |
| 68000.0 | 49.5 | -54.0 | 78.7 | 576.7 | | | |
| 68500.0 | 48.3 | -54.2 | 76.9 | 576.4 | | | |
| 69000.0 | 47.2 | -54.5 | 75.2 | 576.1 | | | |
| 69500.0 | 46.1 | -54.7 | 73.5 | 575.8 | | | |
| 70000.0 | 45.0 | -54.9 | 71.9 | 575.5 | | | |
| 70500.0 | 44.0 | -55.2 | 70.3 | 575.2 | | | |
| 71000.0 | 42.9 | -55.0 | 68.6 | 575.3 | | | |
| 71500.0 | 41.9 | -54.5 | 66.8 | 576.1 | | | |
| 72000.0 | 41.0 | -53.9 | 65.1 | 576.9 | | | |
| 72500.0 | 40.0 | -53.8 | 63.5 | 577.0 | | | |
| 73000.0 | 39.1 | -53.7 | 62.0 | 577.1 | | | |
| 73500.0 | 38.2 | -53.7 | 60.6 | 577.1 | | | |
| 74000.0 | 37.3 | -53.7 | 59.2 | 577.1 | | | |
| 74500.0 | 36.4 | -53.6 | 57.8 | 577.2 | | | |
| 75000.0 | 35.6 | -53.6 | 56.4 | 577.2 | | | |
| 75500.0 | 34.7 | -53.3 | 55.0 | 577.7 | | | |
| 76000.0 | 33.9 | -52.6 | 53.6 | 578.5 | | | |
| 76500.0 | 33.2 | -52.0 | 52.2 | 579.3 | | | |
| 77000.0 | 32.4 | -51.4 | 50.9 | 580.1 | | | |
| 77500.0 | 31.7 | -50.8 | 49.6 | 580.9 | | | |
| 78000.0 | 30.9 | -50.2 | 48.3 | 581.7 | | | |
| 78500.0 | 30.2 | -49.6 | 47.1 | 582.5 | | | |
| 79000.0 | 29.5 | -49.2 | 45.9 | 582.9 | | | |
| 79500.0 | 28.9 | -49.0 | 44.8 | 583.2 | | | |
| 80000.0 | 28.2 | -48.8 | 43.8 | 583.5 | | | |
| 80500.0 | 27.6 | -48.6 | 42.8 | 583.8 | | | |
| 81000.0 | 26.9 | -48.4 | 41.7 | 584.1 | | | |
| 81500.0 | 26.3 | -48.1 | 40.8 | 584.4 | | | |
| 82000.0 | 25.7 | -47.9 | 39.8 | 584.7 | | | |
| 82500.0 | 25.1 | -47.7 | 38.8 | 585.0 | | | |
| 83000.0 | 24.6 | -47.5 | 37.9 | 585.3 | | | |

STATION ALTITUDE 4051.00 FEET MSL
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 ASCENSION NO. 18

MANDATORY LEVELS
 0900030018
 JALLEN
 TABLE 20

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

| PRESSURE GEOPOTENTIAL MILLIBARS | FEET | AIR DEGREES | TEMPERATURE DEGREES CENTIGRAVE | REL. HUM. PERCENT | WIND DATA | |
|------------------------------------|--------|----------------|--------------------------------------|----------------------|--------------------------|----------------|
| | | | | | DIRECTION DEGREES(TN) | SPEED KNOTS |
| 500.0 | 4907. | 9.0 | -5.3 | 34. | 309.8 | 1.5 |
| 800.0 | 6627. | 5.9 | -7.1 | 39. | 302.8 | 4.9 |
| 750.0 | 8348. | 1.8 | -9.2 | 44. | 254.3 | 12.8 |
| 700.0 | 10160. | -1.7 | -15.5 | 34. | 267.6 | 23.7 |
| 650.0 | 12084. | -4.8 | -22.2 | 24. | 282.0 | 32.8 |
| 600.0 | 14135. | -8.4 | -24.4 | 26. | 269.9 | 41.1 |
| 550.0 | 16328. | -13.8 | -26.5 | 29. | 264.8 | 43.3 |
| 500.0 | 18677. | -19.8 | -32.2 | 32. | 262.5 | 45.2 |
| 450.0 | 21214. | -24.9 | -35.6 | 36. | 259.5 | 54.8 |
| 400.0 | 23988. | -31.2 | -42.4 | 32. | 258.3 | 61.7 |
| 350.0 | 27049. | -38.1 | -48.0 | 31. | 253.0 | 66.8 |
| 300.0 | 30469. | -46.5 | | | 248.1 | 68.5 |
| 250.0 | 34358. | -55.0 | | | 251.6 | 76.5 |
| 200.0 | 38960. | -59.7 | | | 249.8 | 71.9 |
| 175.0 | 41737. | -56.3 | | | 250.9 | 65.7 |
| 150.0 | 44954. | -55.7 | | | 251.4 | 60.0 |
| 125.0 | 48732. | -59.3 | | | 239.7 | 71.9 |
| 100.0 | 53278. | -61.5 | | | 254.1 | 69.1 |
| 80.0 | 57850. | -56.0 | | | 249.5 | 45.5 |
| 70.0 | 60648. | -56.8 | | | 238.4 | 17.8 |
| 60.0 | 63810. | -62.6 | | | 231.6 | 15.9 |
| 50.0 | 67534. | -53.9 | | | | |
| 40.0 | 72222. | -53.8 | | | | |
| 30.0 | 78323. | -49.4 | | | | |
| 25.0 | 82259. | -47.6 | | | | |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.